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WARPAINT SERIES No.2

**HAWKER SIDDELEY/
BLACKBURN**

BUCCANEER

BY PAUL JACKSON AND PETER FOSTER

Two Hawker Siddeley Buccaneer S.Mk.2s of No. 12 Squadron based at RAF Lossiemouth shortly before the squadron was disbanded under the Government's Options for Change policy in 1994. The squadron had been engaged in maritime strike duties until that time.



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Two Hawker Siddeley Buccaneer S.2Bs of 237 Operational Conversion Unit, then based at RAF Lossiemouth. Both aircraft are seen in the colours used by the unit during the late eighties when Nos. 12 and 208 Squadrons were also based there. To distinguish between each, the three units adopted two-letter codes for the tail unit, 237 OCU's ending in 'C'. (MoD)



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BUCCANEER

By Paul A. Jackson

with additional material by Peter Foster

The fifth NA.39 trials aircraft XK490 is flanked by the prototype XK486 (left) and XK487 during a press photographic sortie from Holme. Note that both 486 and 487 have been fitted with production-type airbrakes of a slightly different design.

THE face of air warfare underwent what was perhaps its most profound change in a muddy field near the Northamptonshire village of Weedon on 26 February 1935. Three men in an ancient converted van pretentiously called a 'travelling laboratory', watched a trace of light travel across a cathode ray tube, representing a Heyford bomber passing overhead. Later to be known as radar, the invention demonstrated that day robbed the high-flying military aircraft of its principal element - surprise.

Only close to the ground was the radar eye blind, as buildings and geographical features reflected a multitude of echoes to produce a 'clutter' on the defender's screen. It was this weakness which the Admiralty intended to exploit when in 1952 it issued Specification M.148T for a shipborne strike aircraft, capable of carrying a nuclear weapon into the heart of an extensively defended enemy country.

The result of that Specification was the Buccaneer; a hard-hitting aircraft later adopted by the RAF and for many years forming the deep-penetration strike element

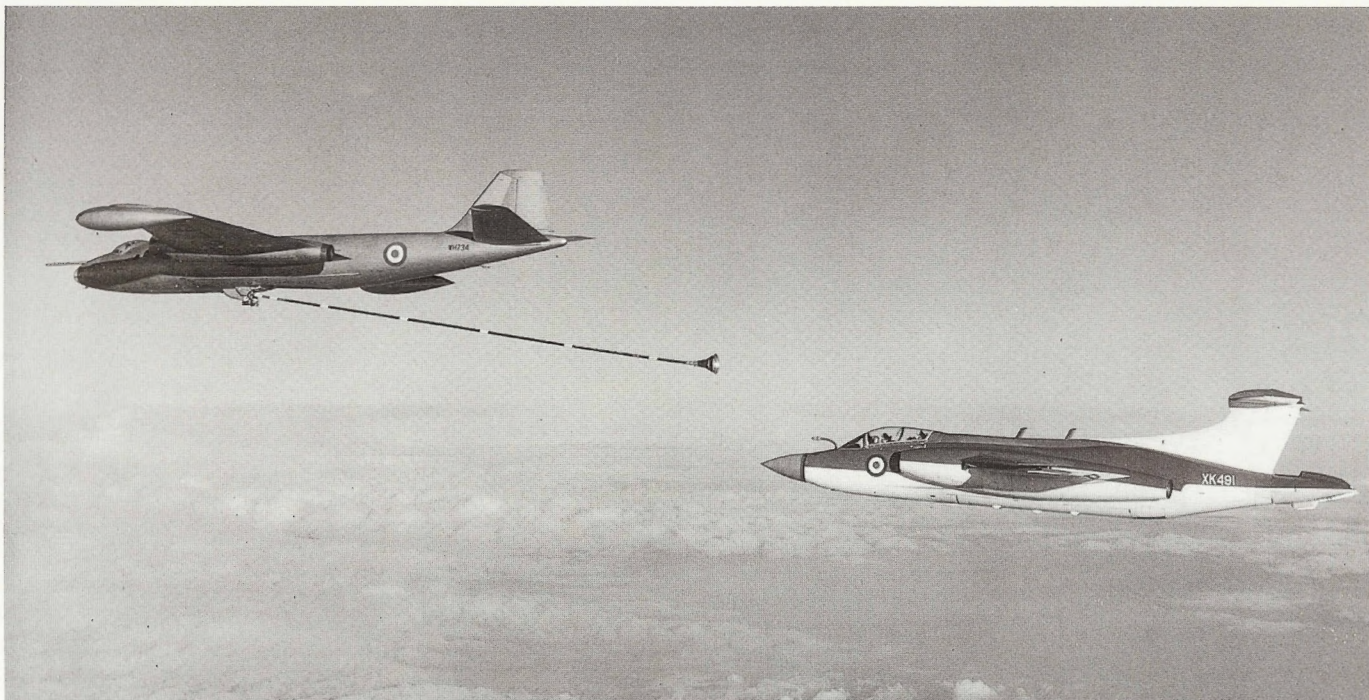
of RAF Germany. When it entered service, the Buccaneer put Britain years ahead of the rest of the world in the technology of low-level attack, and even with the advent of its successor the Tornado, there are many who will argue about the Buccaneer's supremacy during its service career.

Almost all of the major British aircraft

manufacturing companies tendered for M.148T (later, and better known, as NA.39), but the award went to one of the Navy's traditional suppliers, Blackburn & General Aircraft of Brough with their B.103, which was alternatively designated YB.3 in the SBAC aircraft nomenclature system.



The last of 20 development aircraft was XK536 initially used by the A&AEE Boscombe Down for carrier trials. (APN)



XK491 was the first NA.39 with a retractable flight refuelling probe and undertook trials with Canberra WH734. Note the unpainted radome.

As was the case with the slightly earlier Lightning, the development contract, awarded in July 1955 included 20 pre-production aircraft to speed the task of clearing the design for service, but the great secrecy attached to the project allowed only the briefest of references to the NA.39, and the first official acknowledgement of its existence did not come until February 1957.

Producing the NA.39 was a great challenge for both the designers and engineers at Brough. The aircraft had to be of immense strength to withstand the severe stresses of near-supersonic flight at a few feet above the sea or ground, yet have folding wings for stowage on an aircraft carrier. The problem was solved by new constructional methods involving sculptural milling of wing panels from solid metal and producing spars and ribs from single steel forgings.

Aerodynamic features also called for radical thinking, the most obvious innovation being the employment of 'area rule' to delay the onset of drag-rise at high speed, and to provide the crew with an easier ride. Area rule dictated a bulged rear fuselage, and this was put to good use as an avionics bay. A



second novelty was boundary layer control over wings and all control surfaces; air bled from the two 7,100lb st de Havilland Gyron Junior engines was released through leading edge slits, re-energised slow-moving air near the aircraft's skin, increasing aerodynamic efficiency and reducing approach speed by 12 knots.

TRIALS AIRCRAFT

Early in April 1958, XK486, the prototype NA.39, was transferred by road to the Royal Aircraft Establishment, Bedford, where it made its first flight on the 30th of that month

Buccaneer S.1 XN965 was operated by the shore-based training unit, 809 Squadron, before it was re-numbered 736 Squadron in March 1965. It thus wears the former's Phoenix insignia with the latter's side-number '636'. Note that the radome is white and not yellow. (MAP)

in the hands of company test pilot Derek Whitehead. After preliminary handling trials, the aircraft transferred to Blackburn's flight test centre at Holme-on-Spalding-Moor on 9 July.

Holme had been chosen for development work, as the Brough runway was inadequate for combat aircraft operations, and every Buccaneer built had to be towed 18 miles from Brough to Holme before its first flight. The first such journey was made by XK487, which flew on 26 August. It was displayed in the SBAC Farnborough show static park a few days later, whilst XK 486 performed the aerial honours.

The remaining 18 development aircraft (XK488-491, XK523-536) appeared over the next three years, the last in December 1961, and changes of external configuration and internal equipment were particularly evident on the first few.

XK486-488 had short noses, fitted with probes, and four small serrated fins on the



Buccaneer S.1 XK533 682/LM of 7002 Squadron, Lossiemouth, during the acceptance trials of the aircraft. (FAA museum)

Hawker Siddeley Buccaneer camouflage and markings

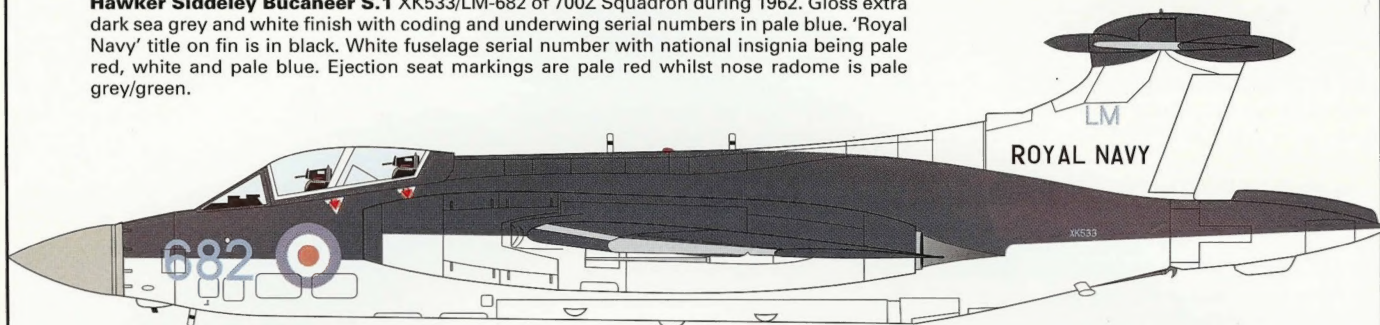
HAWKER SIDDELEY BUCCANEER COLOUR KEY

Natural Fibreglass (grey/green)	Pale Blue	Pale Red BS-111	Light-Blue	Gold	Medium Sea Grey BS-637	Camouflage Grey BS-626							

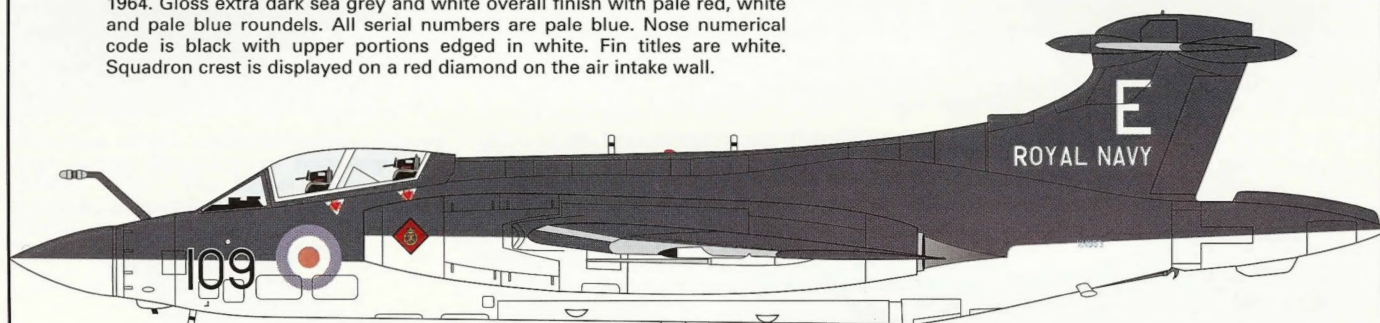
Colour notes: Leading edges of S.1 and S.2 Buccaneers are natural metal. S.2 aircraft only have natural metal air intake leading edges. Cockpit canopies are edged in cream and some aerials are also in cream (shown in white for clarity). Ejection seat triangles, except on white-finished aircraft are red and white. Rescue arrows are yellow except for XW986 which uses red.

DRAWINGS BY DAVID HOWLEY

Hawker Siddeley Buccaneer S.1 XK533/LM-682 of 700Z Squadron during 1962. Gloss extra dark sea grey and white finish with coding and underwing serial numbers in pale blue. 'Royal Navy' title on fin is in black. White fuselage serial number with national insignia being pale red, white and pale blue. Ejection seat markings are pale red whilst nose radome is pale grey/green.

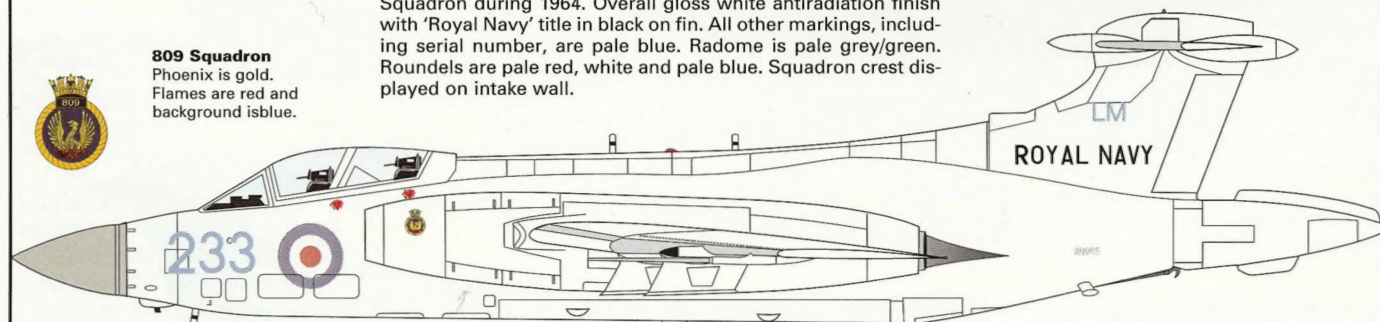


Hawker Siddeley Buccaneer S.1 XN953/E-109 of 800 Squadron during 1964. Gloss extra dark sea grey and white overall finish with pale red, white and pale blue roundels. All serial numbers are pale blue. Nose numerical code is black with upper portions edged in white. Fin titles are white. Squadron crest is displayed on a red diamond on the air intake wall.



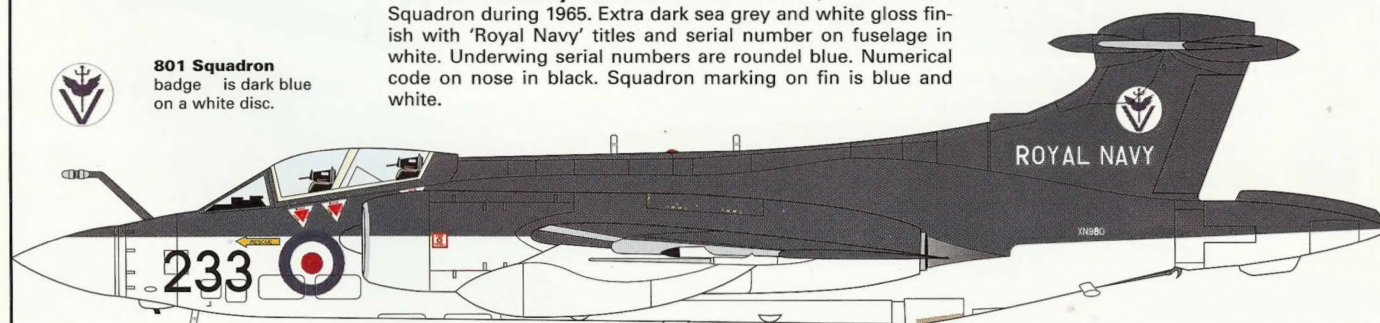
Hawker Siddeley Buccaneer S.1 XN965/LM-233 of 809 Squadron during 1964. Overall gloss white antiradiation finish with 'Royal Navy' title in black on fin. All other markings, including serial number, are pale blue. Radome is pale grey/green. Roundels are pale red, white and pale blue. Squadron crest displayed on intake wall.

809 Squadron
Phoenix is gold.
Flames are red and
background is blue.



Hawker Siddeley Buccaneer S.2 XN980/V-233 of 801 Squadron during 1965. Extra dark sea grey and white gloss finish with 'Royal Navy' titles and serial number on fuselage in white. Underwing serial numbers are roundel blue. Numerical code on nose in black. Squadron marking on fin is blue and white.

801 Squadron
badge is dark blue
on a white disc.





A rare picture taken of a Buccaneer S.1 of 800 Squadron on board HMS Eagle during its Far East tour shortly after the squadron commissioned. A Bullpup missile can be seen under the wings. (Pat Knight)

petal-type airbrakes. The first two had blue and white colours, whilst XK488 (the engine testbed) was the first with grey upper surfaces. XK486 was used for basic aerodynamic trials and XK487 introduced thicker wing skinning for flutter experiments, before use by Ferranti as an electronics test bed.

The next two (XK489 and 490) had a single split fin on top of the airbrake, and both eventually had longer noses with probes, although XK489 initially had the short nose. Grey colours were standardised from 489 onwards, but the fin was now white instead of the upper surface colour, and 489 had the legend 'ROYAL NAVY' retrospectively applied to the fin. This aircraft was the first with folding wings and arrestor hook, and 490 introduced the rotating bomb door, and standardised the application of Royal Navy

titles to the vertical fin.

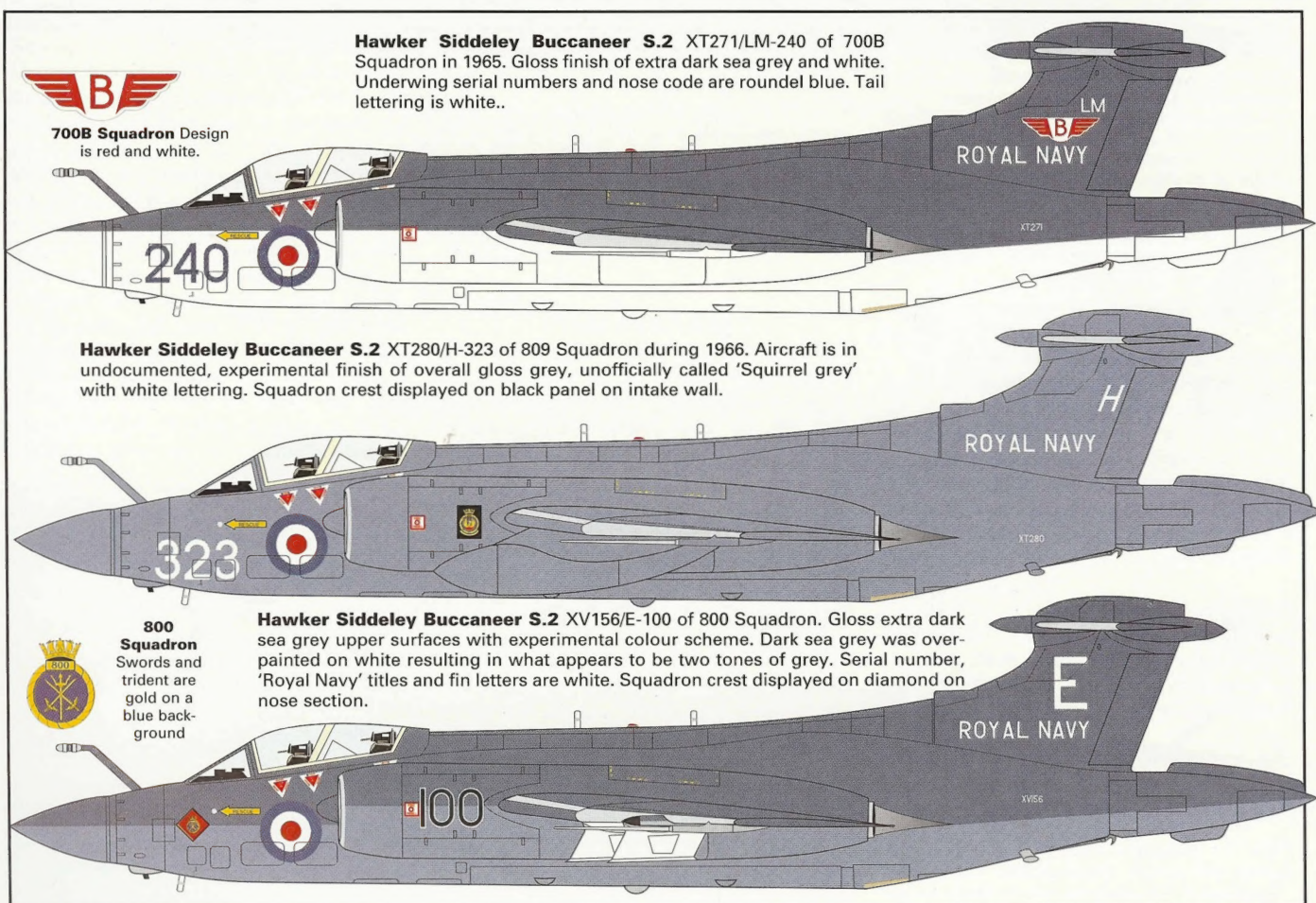
XK491 was the first with a retractable refuelling probe and small fins above and below the airbrakes, nose probes being discontinued at this point. XK523 had a full navigation system.

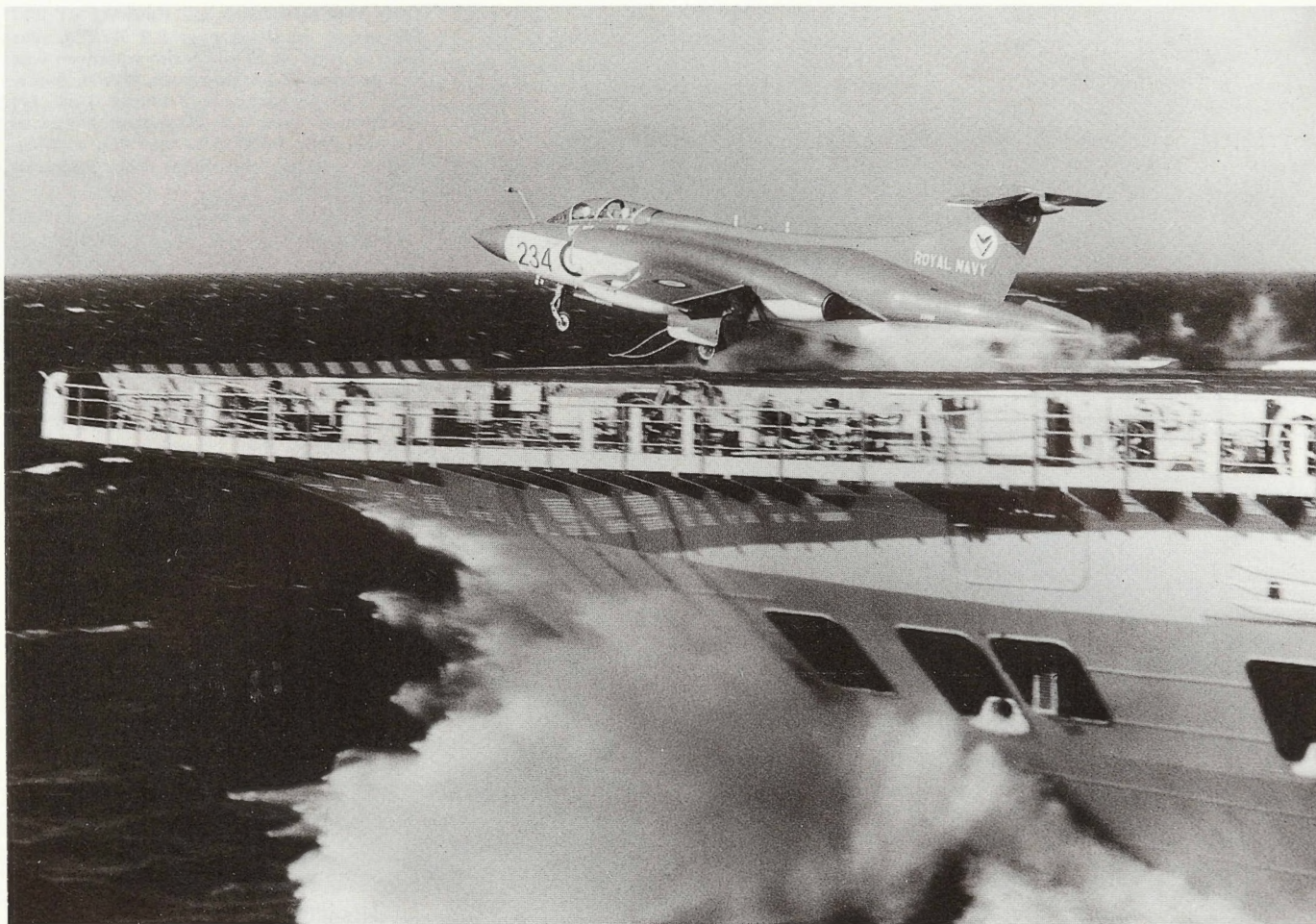
From XK524, production jigs were used for assembly, this aircraft having a yellow fibreglass radome and a bullet fairing at the junction of the fin and elevator. Underwing serials were presented in a larger format from this point, but the change was retrospectively applied to 523. Remaining aircraft of the development batch were essentially to production standard, with XK525-527 allocated to the A & AEE, XK528-530 to the Royal Aircraft Establishments at Farnborough and Bedford, and XK531-536 to service trials.

Carrier operations began on 19 January 1960, when Derek Whitehead landed XK523 on the deck of HMS Victorious, cruising in the Channel. XK489 followed soon afterwards, and the pair completed 30 take-offs in three and a half days. HMS Ark Royal hosted the next series of trials (by XK526 and XK527) in the Mediterranean during January 1961, and in July, XK526 went by sea to Singapore for tropical evaluation.

The Fleet Air Arm was naturally eager to take delivery of the new aircraft, which was officially named Buccaneer S.Mk.1 in August 1960, and formed 700Z Squadron at Lossiemouth under Cdr.A.J.Leahy on 7 March 1961 as the intensive trials unit for the type. Initially 700Z Squadron had only two Hunters for crew training, but at last it received its first two Buccaneers on 3 August when XK531 and XK532 arrived from Holme.

In service, the Buccaneer adopted a larger roundel beneath the cockpit, whilst the serial number at the rear of the fuselage was reduced to minute proportions. The aircraft 'side number' was applied to the forward fuselage (700Z was allocated the series 680-684), and the station identification code 'LM' on the fin. A drastic revision of markings was evident when the squadron's fourth aircraft, XK534, arrived at Lossiemouth on 22 November 1961, as this was the first overall white 'anti-flash' finish, with pale blue lettering and number except for





Captured at the moment of catapult launch from *HMS Victorious* is Buccaneer S.2 XN981. Note the higher dividing line between grey and white on the nose and engine nacelles against earlier production Buccaneer S.2s. (MoD)

'ROYAL NAVY' in darker blue.

OPERATIONAL SERVICE

Production Buccaneer S.1s followed immediately behind the last of the 20 development aircraft, and XN922 (the first of 40 ordered in September 1958) flew for the first time at Holme on 23 January 1962. Allocated to the A & AEE, it undertook tropical trials at Idris, Libya, but crashed into a hangar at its home base of Boscombe Down on 5 July 1962.

The next two Buccaneers were briefly used by 700Z Squadron between May and July, and thus the first to arrive on an operational squadron was XN925, which was allocated to 801 Squadron at



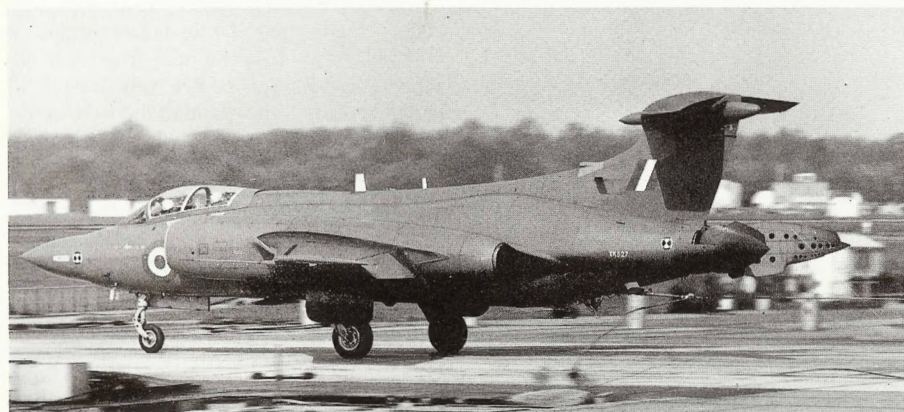
Lossiemouth 17 July under the command of Lt.Cdr.E.A.Anson, and marked its aircraft with side numbers between 115 and 122, plus the fin code 'R'; in preparation for development flying aboard *HMS Ark Royal*.

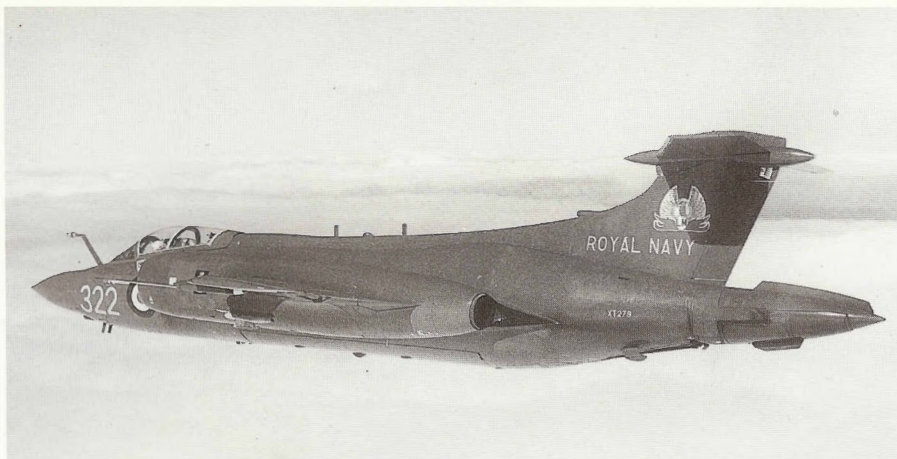
Receiving its final aircraft on 15 January 1963, the squadron completed its

The first production Buccaneer S.2 was XN974, which first flew in June 1964. It was subsequently used by A & AEE for extensive trials purposes.(MAP)

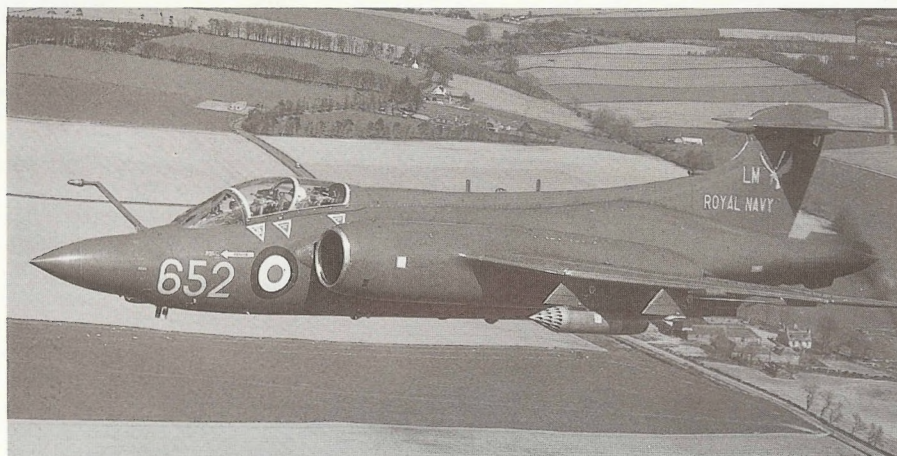
working-up period, and on 20 February all aircraft except '121' joined their assigned carrier in the English Channel. The cruise was brief, and by May, the Buccaneers returned to Lossiemouth having their fin codes changed to 'V', before transferring to *Victorious* on 14 August, en route for the Far East. The Buccaneer was put through its paces by 700Z Squadron in a thorough shakedown of operational capability, systems reliability, servicing requirements and emergency drills. Its work at last at an end, the unit disbanded on 15 January 1963.

The second Buccaneer S.Mk.2 conversion was XK527 which was later repainted in overall dark sea grey after Martel conversions. It undertook arrester gear trials at Bedford complete with fin flash. (RAE)





Left: The attractive tail marking of 809 Squadron, on Buccaneer S.2 XT279, was seen in June 1970 when the squadron was shore-based at Lossiemouth. (MoD). Below left: The Operational Training Unit for Buccaneers was 736 Squadron based at Lossiemouth. 652/LM is carrying a SNEB rocket pod on the inner port weapons pylon. (MoD)



Returning westwards, *Victorious* arrived off Dar-es-Salaam in January 1964, where it relieved *HMS Centaur* on standby to provide support for ground forces quelling East African revolts. This was the first occasion on which the Buccaneer was assigned an operational role, but in the event, its active participation was not required. A prolonged tour of duty aboard *Victorious* ended in July 1965 when the carrier returned to Portsmouth and 801 Squadron flew up to Lossiemouth for disbandment.

The second seagoing squadron was No.800 which was commissioned at Lossiemouth on 18 March 1964 with aircraft beginning with XN956 '100' all wearing the fin code 'E'. *HMS Eagle* sailed for the Far East on 2 December 1964 with 800's aircraft on board, these including four Supermarine Scimitars of 800B Squadron. In hot climates the Buccaneer could not be catapult-launched at maximum weight, so the Scimitars were used to top up the tanks before the Buccaneers left the area of the carrier. Appropriately enough, the Scimitars' fins were decorated with the insignia of a frothing tankard of beer.

800 Squadron carried out its share of operational work when *Eagle* replaced *Ark Royal* in the Mozambique Channel on 15 March 1966. Rhodesia had just declared UDI and the Royal Navy was used to patrol the shipping lanes to prevent oil tankers discharging their cargoes into the direct pipeline leading from Beira to the rebel country. *HMS Eagle* at last parted company with 800 Squadron in September 1966 when the Buccaneers returned to Lossiemouth.

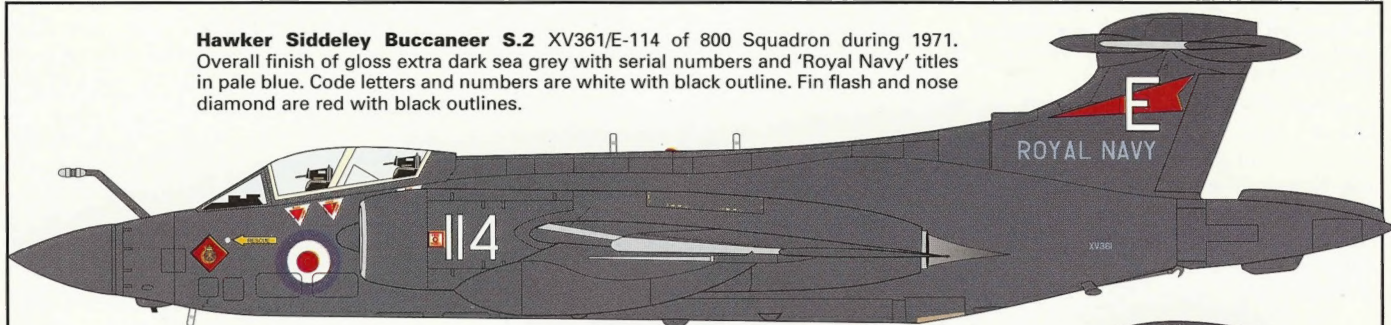
To ensure an adequate supply of aircrew for embarked units, the Fleet Air Arm normally operates a 'Headquarters' squadron, and for the Buccaneer, this was 809, naturally based at Lossiemouth. The squadron formed on 15 January 1963 by the simple expedient of re-numbering the trials unit, 700Z Squadron, and adding some further aircraft, including some of 801's early mounts. The side number range of 220-234 was used, and although the Buccaneers often deployed to aircraft carriers for training, their shore-based status was indicated by the fin code remaining 'LM'.

As the Buccaneer was still in the early stages of naval use, 809 Squadron continued with the task of operational development, but when this aspect of the work was completed early in 1965, the unit's purely training role qualified it for a number in the 700 series, reserved for training and other non-



Top left: One of 801 Squadron's Buccaneer S.2s, XV338, displays the squadron badge in white on the fin when on board HMS Hermes. (G.Mangion) Left: The Buccaneer was used for the buddy in-flight refuelling system when occasion demanded. XV336 displays the refuelling marks on the fin and underwing pod when landing at Luqa, Malta, from HMS Eagle. (G.Mangion)

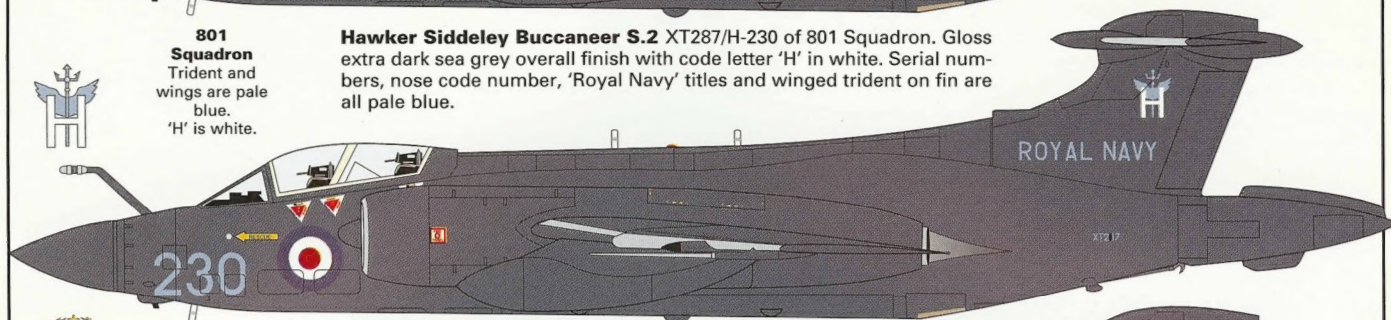
Hawker Siddeley Buccaneer S.2 XV361/E-114 of 800 Squadron during 1971. Overall finish of gloss extra dark sea grey with serial numbers and 'Royal Navy' titles in pale blue. Code letters and numbers are white with black outline. Fin flash and nose diamond are red with black outlines.



801 Squadron
Trident and wings are pale blue. 'H' is white.



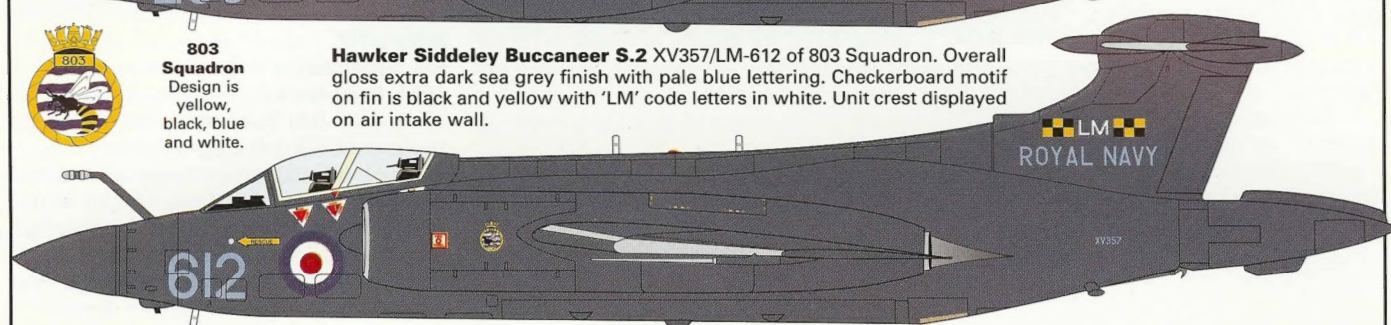
Hawker Siddeley Buccaneer S.2 XT287/H-230 of 801 Squadron. Gloss extra dark sea grey overall finish with code letter 'H' in white. Serial numbers, nose code number, 'Royal Navy' titles and winged trident on fin are all pale blue.



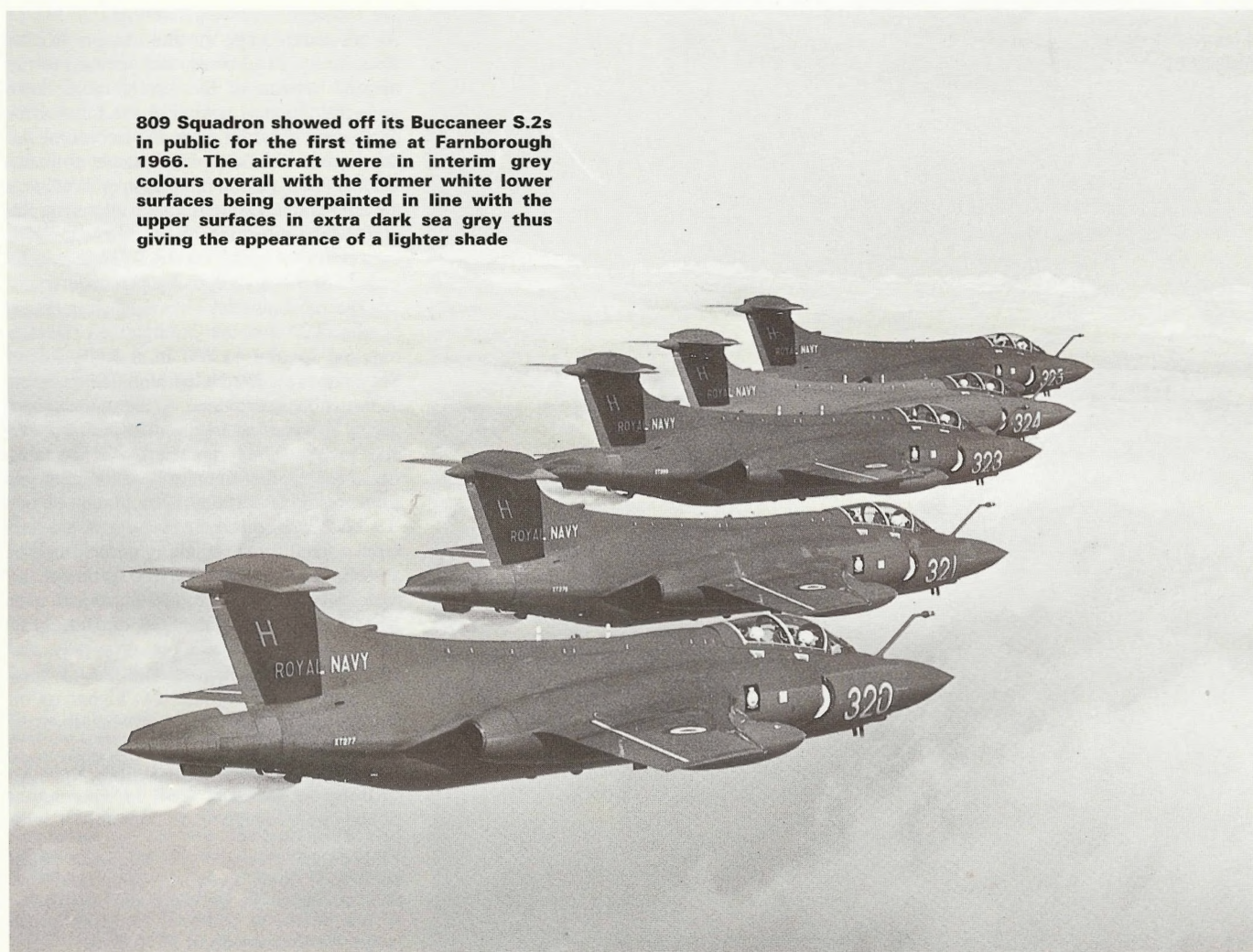
803 Squadron
Design is yellow, black, blue and white.



Hawker Siddeley Buccaneer S.2 XV357/LM-612 of 803 Squadron. Overall gloss extra dark sea grey finish with pale blue lettering. Checkerboard motif on fin is black and yellow with 'LM' code letters in white. Unit crest displayed on air intake wall.



809 Squadron showed off its Buccaneer S.2s in public for the first time at Farnborough 1966. The aircraft were in interim grey colours overall with the former white lower surfaces being overpainted in line with the upper surfaces in extra dark sea grey thus giving the appearance of a lighter shade



Buccaneer S.2 XV157 was to be one of the conversion aircraft to S.2B standard. It is seen here on HMS Eagle when serving with 800 Squadron. (A.W.Hall)

operational formations. Disbanded on 26 March 1965, it briefly became 709 Squadron, but this was quickly changed to 736 Squadron when the Scimitar training flight with that number plate moved on to become 764B Squadron. Aircraft of 736 Squadron were coded between 630/LM and 644/LM.

The final squadron to use the Buccaneer S.1 was 803 Squadron, formed at Lossiemouth in June 1967 as the headquarters unit for the S.Mk.2 which operated four aircraft (610/LM to 613/LM) alongside its newer equipment, from commissioning until the last two were withdrawn in July 1968.

Buccaneer S.Mk.1s were finally pensioned off by the Navy in December 1970 when the last few on charge to 736 Squadron were handed over to the Lossiemouth Aircraft Holding Unit for disposal. Only 27 out of the 40 S.1s survived to retirement, whilst seven of the development aircraft had also been destroyed in accidents.

Redundant S.1s were allocated to static training, fire practice or decoy duties with the RAF, although a few were earmarked for preservation. XN954 met a more spectacular end, when it dropped off the end of *Ark*



Royal during the making of a safety film on 14 April 1974. The exercise would have been unnecessary had cameras witnessed the unintentional presentation to Davy Jones of S.2 XT269 from the same carrier on 15 February 1972.

All production Buccaneer S.Mk.1s left Holme in overall white colours, the last

being XN973 which flew in December 1963 and was delivered to Lossiemouth on 28 May 1964. Radomes were initially in yellow, but some were later coloured white. By 1962, however, many gained grey upper surfaces and fins, although others continued in white up to 1965. A further change began in the following year, when S.1s followed the S.2 into an overall grey colour scheme with blue lettering, and it was in these markings that most of the survivors ended their days.

UPDATED VERSION

At an early stage in the design of the Buccaneer, Blackburns had envisaged an updated version of the aircraft with more powerful engines and advanced radar. A production order for what was to become the Buccaneer S.Mk.2 was placed by the Ministry of Aviation on 8 January 1962, and covered conversion of two development aircraft to the new mark. In addition, production aircraft 41-50 were re-ordered as S.2s instead of S.1s as originally planned.

The most obvious external characteristic of the S.2 was the enlarged air intakes required for the 11,200 lb st Rolls Royce Spey powerplants, the additional 30 per cent of thrust being provided by the new engines giving a welcome increase in performance and range. Thus modified, XK526 was flown for the first time by Derek Whitehead from Holme on 17 May 1963.

XK527 followed on 19 August and featured a fixed flight refuelling probe, fitted to all subsequent aircraft, as well as one of the trials S.1s, XN923. Production began with XN975 on 30 June and 976 on 3 August, these having from the outset a grey and white colour scheme, although the division between the two colours was higher up on the forward fuselage than had been the case with the S.1.

Carrier trials began when XN975 operated from *Ark Royal* in April 1965, and continued in August and September with

Two Buccaneers of 809 Squadron from HMS Ark Royal perform some fast, low level manoeuvres during a demonstration of fire power to overseas representatives in the Mediterranean in 1978 (MoD)



XN527, XN974 and XN976 flying from the *USS Lexington* in US waters. On the return journey, 974 flew the 1,950 miles from Goose Bay, Canada, to Lossiemouth in four hours 16 minutes without refuelling to become the first Fleet Air Arm aircraft to make a non-stop Atlantic crossing.

To prepare the Buccaneer S.2 for operational service, 700B Squadron formed at Lossiemouth on 9 April 1965 and rapidly achieved a strength of eight aircraft coded between 725/LM and 734/LM. The squadron completed its work and disbanded on 30 September, two months after the aircraft codes had been changed to run from 230/LM to 240/LM.

The reason for this move became apparent when 801 Squadron formed on 14 October 1965 with 700B's aircraft, and merely amended the fin letters to 'V', duly embarking on *HMS Victorious* in June 1966 for a cruise to the Far East. Here, it exercised with the US carrier *Enterprise* and took part in flight-refuelling practice with Douglas Skywarriors.

In addition to the first S.Mk.2 order for ten aircraft (transferred from the S.1 contract) further batches of 20, 17, 30 and 17 were ordered, although the last (placed in June 1967) was later cut to seven. This ensured an adequate supply of aircraft for further units, and from the 38th S.2 (XV332, first flown in December 1966), Buccaneers were delivered to the Service in overall grey colours.

Next to form was 809 Squadron on 27 January 1966 with aircraft beginning with XT277 320/H. The squadron embarked on *HMS Hermes* in January 1967, where one of its tasks was to patrol off the Gibraltar area when Spain introduced restrictions on air traffic using the airfield at North Front.

Buccaneer S.2s arrived with 800 Squadron late in 1966 and replaced the S.1s with the same side numbers beginning 100/E and including a rare, named aircraft XV160 104/E 'Lady Penelope' (replaced in 1969 by XT278 104/E 'Lady Penelope II'). Regular deployments continued on board *HMS Eagle* until the carrier was withdrawn from service and 800 Squadron disbanded in February 1972.

A similar fate befell 801 Squadron following changes in carrier assignments. In February 1968, the squadron modified its fin codes to 'H' when it was allocated to *HMS Hermes*, but the ship was transferred to commando operations with a helicopter complement and 801 Squadron disbanded on 21 July 1970.

Shortest-lived of the S.2 units was, however, 803 Squadron. It will be recalled that 803 formed as the headquarters squadron in June 1967 with an initial allocation of four S.1s and to this number were added S.2s

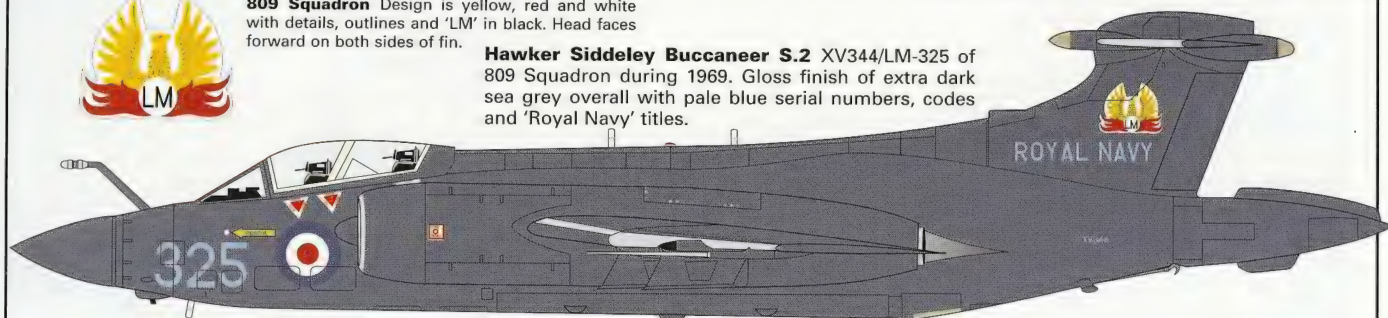
Three pictures showing the launch sequence of a Buccaneer of 809 Squadron from *HMS Ark Royal* in November 1978. Top: The aircraft is ranged on the waist catapult by the deck handling party using hand signals for pre-flight checks. Centre: Tensioned up on the catapult with the nosewheel in the air and all personnel clear of the area. Right: The moment of launch. The strop falls free and the aircraft with eight 500 lb bombs under the wings is airborne. (MoD)





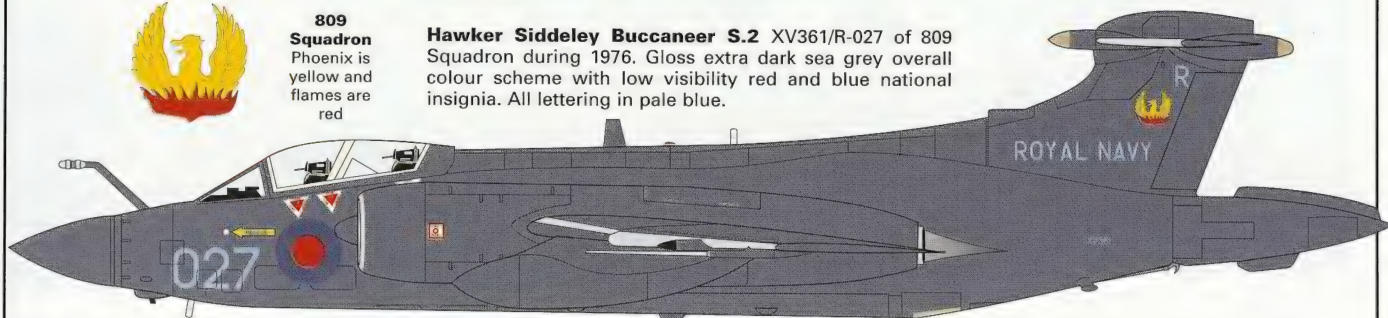
809 Squadron Design is yellow, red and white with details, outlines and 'LM' in black. Head faces forward on both sides of fin.

Hawker Siddeley Buccaneer S.2 XV344/LM-325 of 809 Squadron during 1969. Gloss finish of extra dark sea grey overall with pale blue serial numbers, codes and 'Royal Navy' titles.



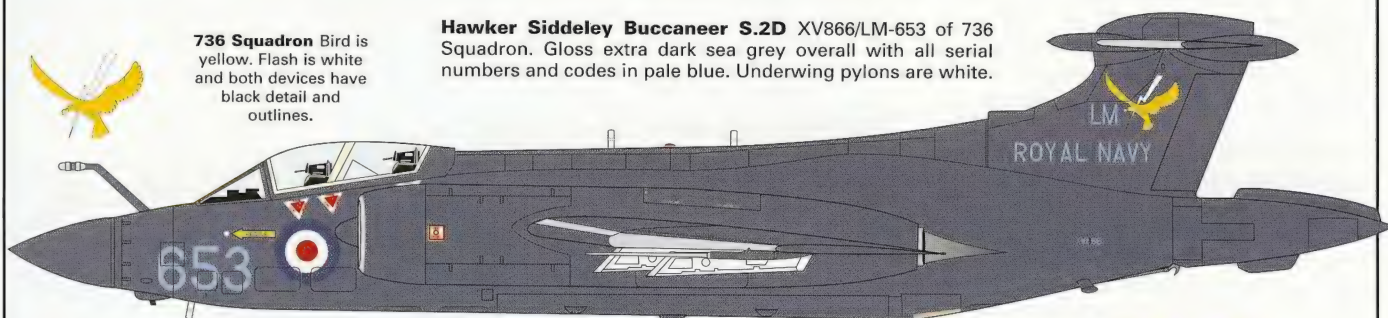
809 Squadron Phoenix is yellow and flames are red

Hawker Siddeley Buccaneer S.2 XV361/R-027 of 809 Squadron during 1976. Gloss extra dark sea grey overall colour scheme with low visibility red and blue national insignia. All lettering in pale blue.

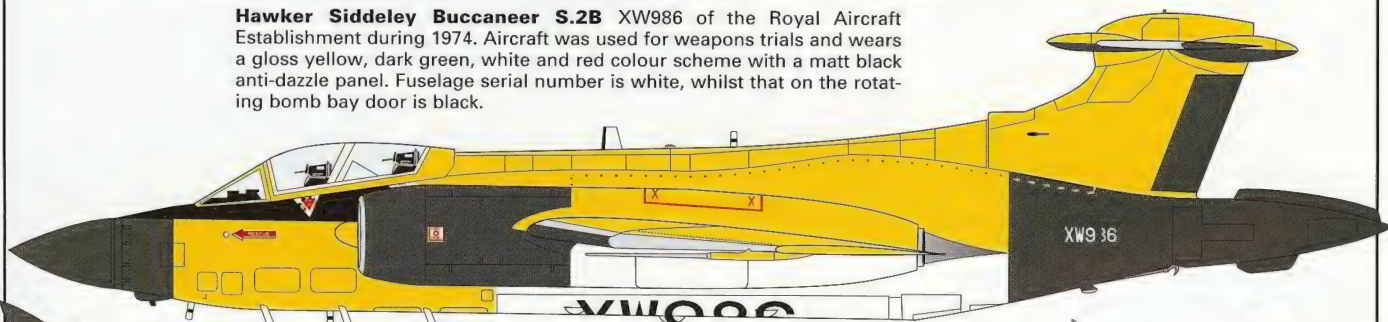


736 Squadron Bird is yellow. Flash is white and both devices have black detail and outlines.

Hawker Siddeley Buccaneer S.2D XV866/LM-653 of 736 Squadron. Gloss extra dark sea grey overall with all serial numbers and codes in pale blue. Underwing pylons are white.



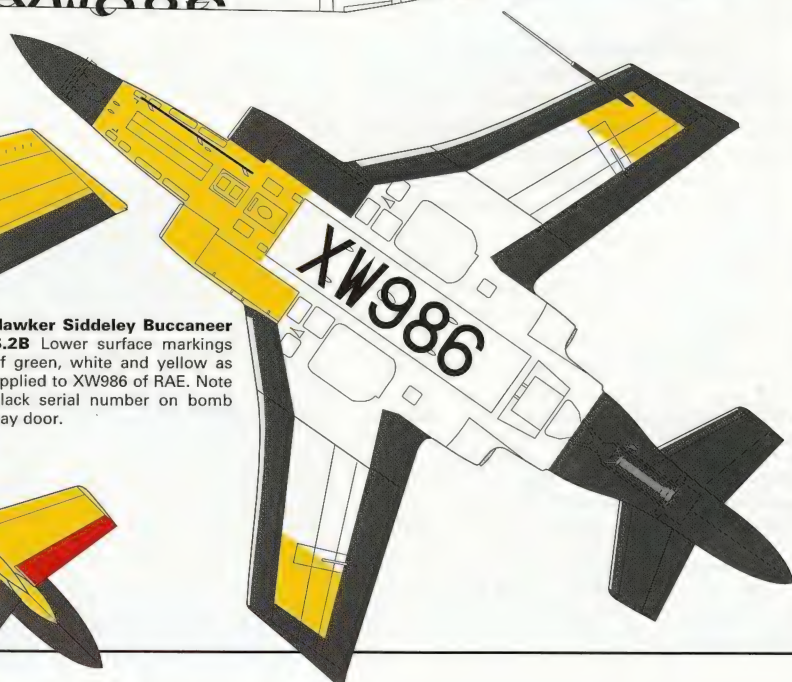
Hawker Siddeley Buccaneer S.2B XW986 of the Royal Aircraft Establishment during 1974. Aircraft was used for weapons trials and wears a gloss yellow, dark green, white and red colour scheme with a matt black anti-dazzle panel. Fuselage serial number is white, whilst that on the rotating bomb bay door is black.



Hawker Siddeley Buccaneer S.2B Upper surface markings of XW986 of the Royal Aircraft Establishment. Note red elevator and some port wing control surfaces.



Hawker Siddeley Buccaneer S.2B Lower surface markings of green, white and yellow as applied to XW986 of RAE. Note black serial number on bomb bay door.



One of the most unusual Buccaneer colour schemes was that given to S.2B XW986 assigned to weapons trials and test duties at the Royal Aircraft Establishment, Farnborough. (Peter Foster)

beginning with 614/LM, although the range of side numbers was extended back to '610' as the S.1s were withdrawn from use. Hardly had this been done, than 803 Squadron disbanded on 18 December 1969.

As the number of fixed-wing aircraft carriers dwindled, so did the need for crew training. 736 Squadron had received its S.2s in May 1966, and extended its side number range up to 657/LM to accommodate the additional aircraft, but with only one operational unit scheduled to remain in service through the 1970s, training responsibility was assumed by the RAF (as will be related later) and 736 Squadron disbanded on 25 February 1972.

The last Fleet Air Arm Buccaneer squadron was thus 809 which had disembarked from *Hermes* in February 1968 (when replaced by 801 Squadron). Its shore-based status was indicated by a change of fin codes to 'LM' but in October 1969 there was a complete change of markings when aircraft were re-numbered beginning 020/R, and in June 1970 it was deployed for the first time on *HMS Ark Royal*.

For the next nine years, *Ark Royal's* air group consisted of the Phantoms of 892 Squadron and a strike element of 809's Buccaneers. Lossiemouth was transferred to the RAF in 1973 and so from August of that year, 809 Squadron made its home at the main RAF Buccaneer base at Honington for ease of servicing.

In later years, its aircraft were converted to carry the Martel air-to-surface TV-guided missile, and received the designation S.Mk.2D (non-Martel aircraft were known



as S.Mk.2Cs although they were modified at Brough with some of the avionics associated with the new weapon in a general upgrading programme). Prototype for the S.2D was the faithful XK527 which had returned to Brough for modification on 29 October 1966.

It was towed down the familiar Yorkshire country lanes to Holme on 13 November 1967 for final preparation, but due to runway repairs XK527 undertook yet another 20 mile journey, this time to RAF Driffield, before it made its first flight. This same circuitous route was also followed by production aircraft XV352-361 before the runway was back in operation early in March 1968. The only external difference between S.2Cs and S.2Ds was a slightly wider spacing of the wing pylons on the latter.

The final run-down of the Fleet Air Arm's S.2s began in mid-1978 when surplus aircraft held at Honington were transferred to the RAF. 809's last 14 Buccaneers were catapulted from *Ark Royal* in the Mediterranean on 27 November and most landed at the RAF Maintenance Unit at St.Athan to be prepared for new ownership. The *Ark* docked at Plymouth on 4 December and 809 Squadron formally disbanded on 15 December, to end a chapter in naval aviation history.

EXPORTS AND PROSPECTS

Before covering the history of the Buccaneer in the RAF, it is necessary to return to the earliest days of the NA.39 to examine the efforts made to sell the aircraft overseas.

The German Naval air arm (Marineflieger) was one of the first to express a strong interest in the aircraft for naval strike operations from land bases bordering the Baltic. When re-formed in the mid-1950s, the Marineflieger had been equipped almost entirely with British aircraft, and on 7-8 September 1960, Herr Strauss, the then Defence Minister, visited

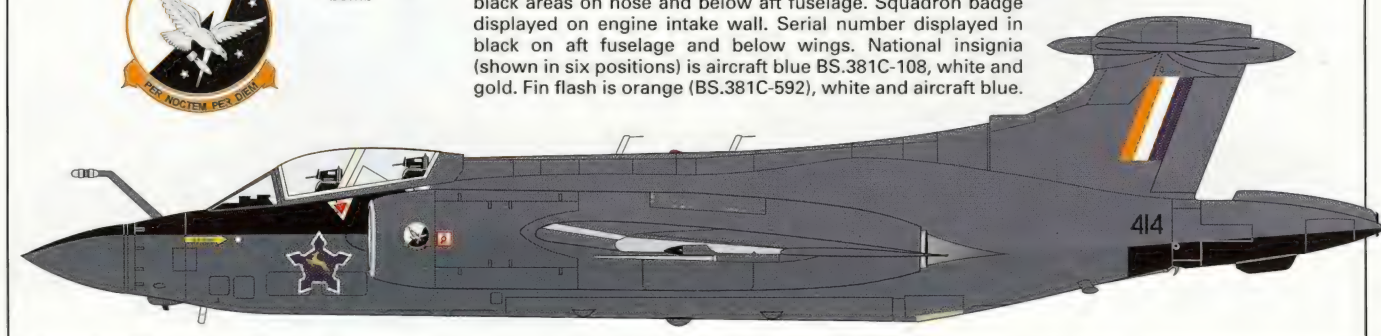


The South African Air Force was the only other country to order Buccaneers. This Mk.50 is seen on display at Waterkloof, its home base, in the service of 24 Squadron. The badge is worn on the intake by aircraft '414'. (APN)



24 Squadron badge is black and white with light grey bird and bomb

Hawker Siddeley Buccaneer S.50 414 of 24 Squadron, South African Air Force during 1974. Gloss finish comprising dark sea grey upper surfaces and PR blue undersides. Matt black areas on nose and below aft fuselage. Squadron badge displayed on engine intake wall. Serial number displayed in black on aft fuselage and below wings. National insignia (shown in six positions) is aircraft blue BS.381C-108, white and gold. Fin flash is orange (BS.381C-592), white and aircraft blue.



Dra



This Buccaneer is depicted carrying an AN/ALWQ-101 ECM pod on its outer starboard pylon and an AN/AVQ-23E Pave Spike laser designation pod on the port inner. This enabled the aircraft to guide laser equipped bombs for two Tornados. Also carried is an AIM-9L Sidewinder for self-defence purposes and a slipper tank carried in place of the starboard inner pylon.

Hav

ings by Mark Rolfe



er Siddeley Buccaneer S.Mk.2B

Hawker Siddeley Buccaneer S.Mk.2B
XX885/L of No.208 Squadron seen at Muharraq February 1991. Buccaneers participating in Operation Desert Storm were painted in an overall finish of Desert Sand. As can be seen this weathered quite considerably and the aircraft soon took on a dirty look, particularly around the engine panels and undersides.. Many in-theatre RAF aircraft received nose art during the war and the Buccaneers were no exception. Deploying from Lossiemouth in Scotland, the Buccaneers were named after famous whiskies distilled in the area as can be seen from the enlargement of the nose art. The red aircraft symbol denotes the destruction of an Iraqi transport aircraft, possibly an Antonov An-12 Cub, with laserguided bombs.



Silhouetted against the autumn sun, a Buccaneer S.2B of No.15 Squadron taxis out at Laarbruch to begin a training sortie. The two Buccaneer squadrons in RAF Germany provided an effective deterrent in the strike role for many years. (RAFg PR/R.Brewell)

BS.605 rocket engines of 8,000lb st mounted in a retractable housing in the rear fuselage. The additional boost enabled the aircraft to take off at maximum weight in hot weather conditions in an updated parallel of the well-known JATO bottle.

The S.Mk.50s were given South African serials 411-426, but did most of their test flying with Class 'B' British civil registrations G-2-1 to G-2-16. The first 411/G-2-1, was the sixth production Spey-engined Buccaneer, and made its initial flight at Holme on 9 January 1965. The colour scheme was dark sea grey upper surfaces with PRU blue undersides. 411 later had yellow rear undersides for rocket motor tests.

Crew training was undertaken on the SAAF aircraft at Lossiemouth, and by October 1965 412-419 were ready for delivery. All left on the 27th of the month, but 417 ditched south of the Canary Islands on the 31st, and thus only seven arrived at Waterkloof on 3 November for No.24 Squadron. Replacement was out of the question, as a change of British government had resulted in a veto on any further supplies beyond the 16 previously agreed.

In view of this ruling, the remaining eight were shipped by sea from Hull docks in two equal batches in August and October 1966. Nevertheless, service attrition has been high, and with the loss of an aircraft near Roetdam on 9 January 1979, the SAAF was reduced to only six of the original 16. As far as is known, no approaches have been made to obtain ex-RAF aircraft to increase No. 24

Dunsfold to examine XK489.

In prospect was an order to replace 64 Hawker Sea Hawks with more potent equipment, and in September 1961, XK534 was flown to Furstenfeldbruck for a more searching evaluation. As late as April 1962, XN922 was shown at the Hannover air display as a reminder of continued interest, but bureaucratic inefficiency in British diplomatic circles, and a German wish to standardise on the F-104 Starfighter, eventually saw the prospective order fall by the

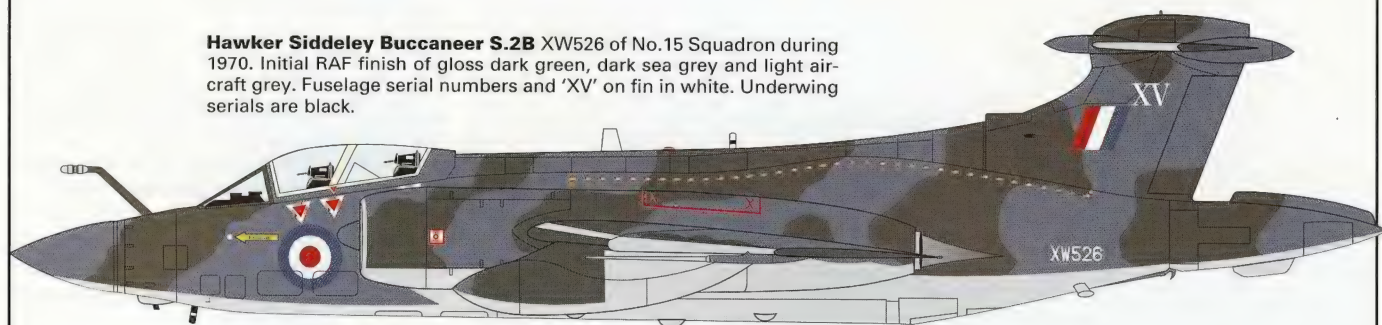
wayside.

More fruitful was an approach by the South African Air Force for 16 Buccaneers (plus a further 14 options) to be used for defence of the vital shipping lanes around the Cape, under the terms of the Simonstown Naval Agreement. Designated S.Mk.50, the SAAF aircraft were basically land-based versions of the Buccaneer with the power-folding of the wings deleted (they could be folded manually, however) but with the important addition of two Bristol Siddeley

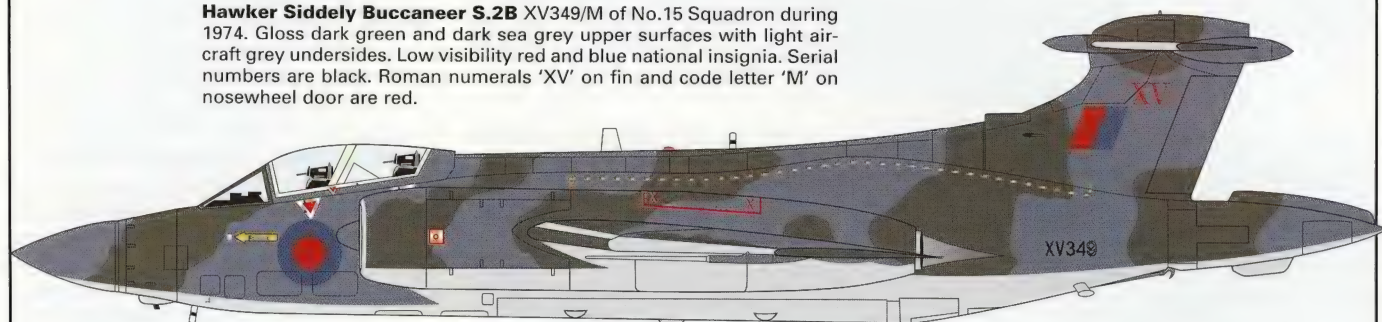
Three Buccaneer S.2s of 237 Operational Conversion Unit, RAF Honington, seen in late 1969 shortly after the unit was set up and wearing the initial colours of gloss dark green and dark grey upper surfaces with light aircraft grey undersides. (MoD)



Hawker Siddeley Buccaneer S.2B XW526 of No.15 Squadron during 1970. Initial RAF finish of gloss dark green, dark sea grey and light aircraft grey. Fuselage serial numbers and 'XV' on fin in white. Underwing serials are black.

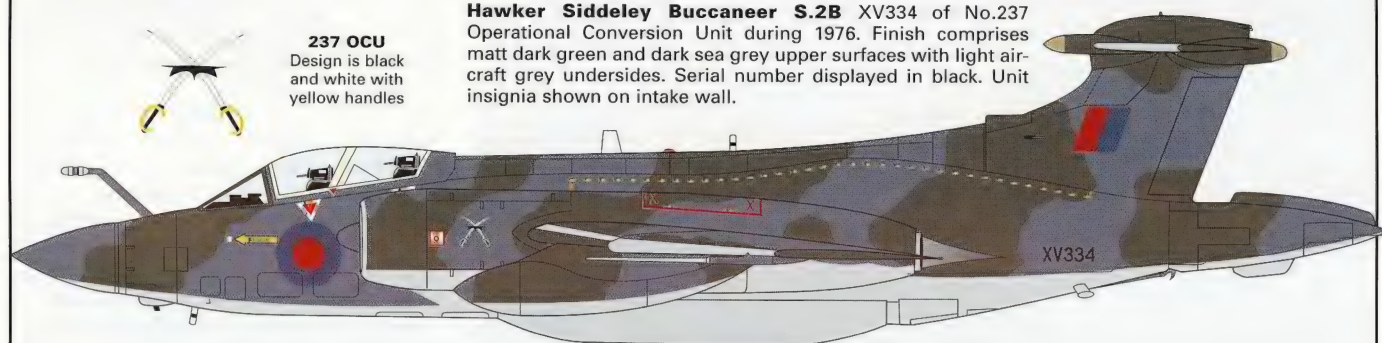


Hawker Siddely Buccaneer S.2B XV349/M of No.15 Squadron during 1974. Gloss dark green and dark sea grey upper surfaces with light aircraft grey undersides. Low visibility red and blue national insignia. Serial numbers are black. Roman numerals 'XV' on fin and code letter 'M' on nosewheel door are red.

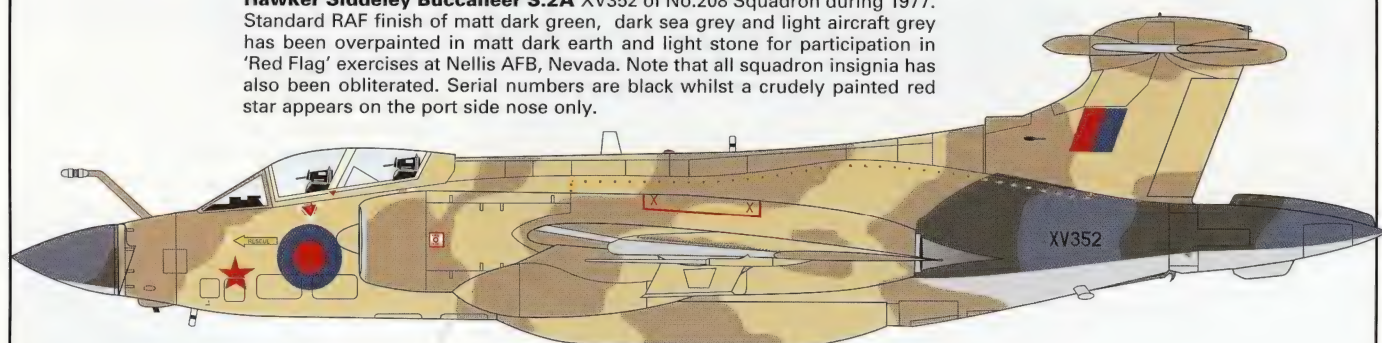


Hawker Siddeley Buccaneer S.2B XV334 of No.237 Operational Conversion Unit during 1976. Finish comprises matt dark green and dark sea grey upper surfaces with light aircraft grey undersides. Serial number displayed in black. Unit insignia shown on intake wall.

237 OCU
Design is black and white with yellow handles



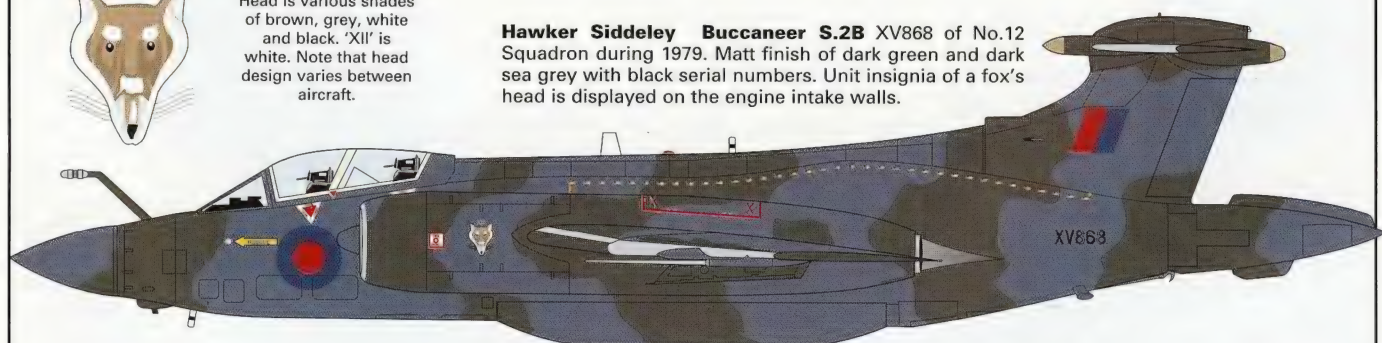
Hawker Siddeley Buccaneer S.2A XV352 of No.208 Squadron during 1977. Standard RAF finish of matt dark green, dark sea grey and light aircraft grey has been overpainted in matt dark earth and light stone for participation in 'Red Flag' exercises at Nellis AFB, Nevada. Note that all squadron insignia has also been obliterated. Serial numbers are black whilst a crudely painted red star appears on the port side nose only.

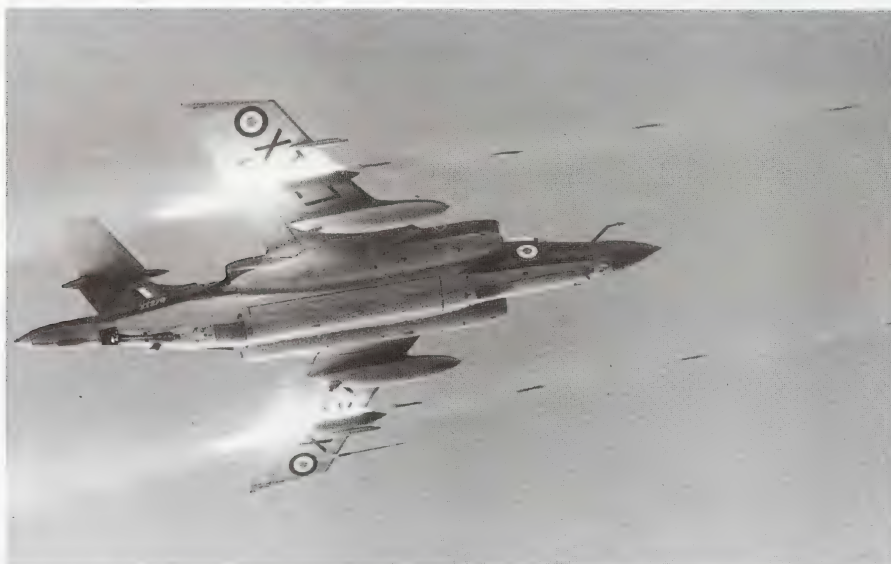
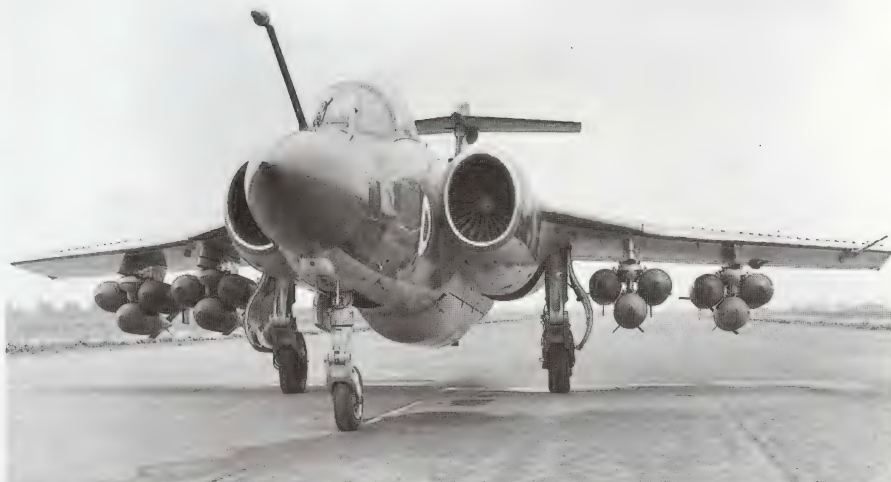


No.12 Squadron
Head is various shades of brown, grey, white and black. 'XII' is white. Note that head design varies between aircraft.



Hawker Siddeley Buccaneer S.2B XV868 of No.12 Squadron during 1979. Matt finish of dark green and dark sea grey with black serial numbers. Unit insignia of a fox's head is displayed on the engine intake walls.





Squadron to a more realistic complement. Further supplies remain a thorny political problem, although Buccaneers have never been reported as engaged in anything other than the maritime role for which they were intended.

RAF STRIKE

The origin of the use by the RAF of the Buccaneer may be found in the muddled defence thinking of the mid-1960s. Having suffered the cancellation of the TSR.2, the RAF was then promised US-built F-111Ks for the low-level strike role, but these too

were cancelled, on grounds of economy. Only one alternative remained, and in July 1968 it was announced that a first batch of 26 Buccaneer S.Mk.2s had been ordered for the RAF, and that some 60 Fleet Air Arm aircraft would be progressively phased into service as the naval force gradually declined.

Newly-built aircraft had the complete Martel equipment fit and were known as S.Mk.2Bs, whilst some 20 surplus Fleet Air Arm aircraft were converted at Brough during 1970-71 as S.Mk.2As with 'partial' Martel modifications. Most then returned to Brough from 1972 onwards for the full S.2B plumbing, but similar work was also under-

Buccaneer armament. Left: An early production S.2B fitted with the maximum 6,000lb external bomb load on all four underwing pylons. (Hawker Siddeley) Centre: XT350 was used extensively for armament trials of the Buccaneer. This picture shows it fitted with a trials round of the sea-skimming Martel anti-shiping missile. Bottom: A Buccaneer S.2 firing both underwing SNEB 2.75 inch rocket packs simultaneously.

taken by the Naval Aircraft Yard at Sydenham, Belfast. In addition, Brough produced a limited number of S.2Bs directly from S.2s during 1970.

This complex procedure produced several 'firsts' and 'prototypes'. XV352 was the first built from scratch with Martel modifications, in November 1967. Its status was confirmed by a white silhouette of the missile on the forward fuselage, although after trials use by the A & AEE it returned to Brough in 1976 for conversion to full operational standard.

The first to wear RAF camouflage was XV350, which had been stored by the Fleet Air Arm and returned to Brough for S.2A conversion, following which it was rolled out on 10 January 1969 and towed to Holme, where it flew on 11 February. Sydenham's first conversion, probably to S.Mk.2A standard, was XV339, but this aircraft crashed during a test flight on 6 October 1972 before delivery. The first production S.Mk.2B for the RAF was XV525, flown at Holme on 8 January 1970.

Honington was selected as the RAF's first Buccaneer base, and No.12 Squadron formed there on 1 October 1969, initially with ex-Fleet Air Arm S.2As, and it was joined by No.237 OCU for crew training of the squadrons which would follow later. Next came No.15 Squadron on 1 October 1970, this transferring to Laarbruch in January 1971 as the first Buccaneer unit in RAF Germany, whilst on 14 October 1972, No.16 Squadron was established at Laarbruch to complete the Buccaneer assignment to 2nd TAF.

Honington returned to a complement of two operational units when No.208 Squadron formed on 1 July 1974 and the last to be established was No.216 Squadron in February 1979. Laarbruch squadrons tended to claim the newly-built aircraft and Honington had mostly ex-Fleet Air Arm examples, most of which were eventually converted to S.Mk.2Bs for maritime strike in Nos.12 and 216 Squadrons, although No.208 retained the S.2A for overland operations.

Aircraft colour schemes gradually changed from the original standard of camouflaged uppersurfaces, white tail serials and black underwing serials. First, tail serials were painted black, along with squadron code letters and No.15 Squadron's previously white 'XV' fin marking. Roundels and fin flashes then changed to Type B (no white), and finally all-over camouflage was introduced, beginning with XV157 and XV342 of No.208 Squadron in January 1978.

Laarbruch aircraft received individual code letters from January 1974, but their sole use at Honington was by No.12 Squadron (June 1972 to August 1973 only) and No.208 Squadron (May to December 1979). All Honington aircraft had the 'last

No.15 Squadron was the first to operate Buccaneers in RAF Germany, these being marked with the Roman numerals 'XV' in white on the fin. (MoD)

three' of the serial applied to the fin in white from early 1980. Squadron insignia was carried by all aircraft, the three belonging to the Naval Flight of No.237 OCU having a mortar board superimposed on the OCU's crossed swords marking until the sub-section was disbanded in 1979. RAF Buccaneers additionally had a bulged bomb bay, but this was omitted from XV350 for early test flying.

After the initial RAF order for 26 Buccaneers, further contracts followed for batches of three, 17 and then a further three, the last of which was XV432, delivered from Holme to Laarbruch for No.15 Squadron on 6 October 1977, marking the end of Buccaneer production after nearly 20 years. The earlier batch of three were produced to a special standard for the RAE Farnborough and its weapons proving range at West Freugh, and these aircraft were finished in high-visibility yellow colours. Though built during late 1973, the first, XW986, was not delivered until March 1975.

From XX885, the first of the batch of 17 aircraft, were built with an ECM installation mounted in the fore-part of the fin/tailplane bullet, this modification being retro-fitted to earlier aircraft from mid-1975.

At the same time, pressure of additional overhaul work on the Phantom at Holme had resulted in a re-organisation of work of what had become the Hawker Siddeley Group and some Buccaneer overhauls were transferred to Bitteswell. The first arrival was XW541 on 26 November 1974, this aircraft leaving for No.16 Squadron on 1 August the following year.

Though not as widely travelled as in its naval hey-day, the Buccaneer managed several overseas trips, of which the most popular were to Nellis Air Force Base, Nevada in the USA for 'Red Flag' exercises. These reflected real war situations as closely as possible, including defending aircraft and missiles which were to be used in good stead a few years later when the Buccaneer crews were engaged in real war scenarios over



Iraq and similar types of terrain.

METAL FATIGUE

Unfortunately one such exercise ended in disaster, when XV345 of No.15 Squadron plunged into a ravine during an ultra-low-level sortie on 7 February 1980. Preliminary examination (subsequently confirmed by RAE Farnborough accident investigation branch) showed that one wing had broken away due to metal fatigue, and the entire Buccaneer fleet of 90 aircraft was grounded for inspection.

As each Buccaneer was checked it soon became apparent that about half of them were suffering from fatigue cracks of varying severity. The two maritime squadrons, Nos.12 and 216, appeared less affected, and the conclusion was drawn that the extra stresses of constant overland manoeuvring had proved too much even for the Buccaneer's robust structure.

Two aircraft were taken to Brough for minute inspection and further fatigue testing, whilst a third was used for airborne trials. All the others remained in their hangars until the grounding order was lifted on 4 August and unaffected or easily repaired Buccaneers returned to operations.

Original plans called for Nos. 12 and 216 Squadrons to transfer to Lossiemouth in mid-1980, but on the appointed day, 4 July, only two of the Hunters issued to the

squadrons for continued pilot efficiency training were able to make the move. No official announcement was made of the number of Buccaneers incapable of being returned to service but No.216 Squadron failed to survive the grounding order and was disbanded leaving No.12 Squadron as the sole maritime Buccaneer squadron.

THE SURVIVORS

Although plans were already laid for the eventual replacement of the Buccaneer by the Tornado GR.1, the venerable 'Brick' was to see a further decade of continued service, a period which was to be its ultimate claim to fame.

The move by No.12 Squadron to RAF Lossiemouth provided SACLANC with only a single maritime attack squadron following the decision to de-activate No.216 Squadron. This shortcoming was corrected three years later in the summer of 1983 by No.208 Squadron when it was re-roled. This unit, in having a primary overland commitment, had, up until this time, remained at RAF

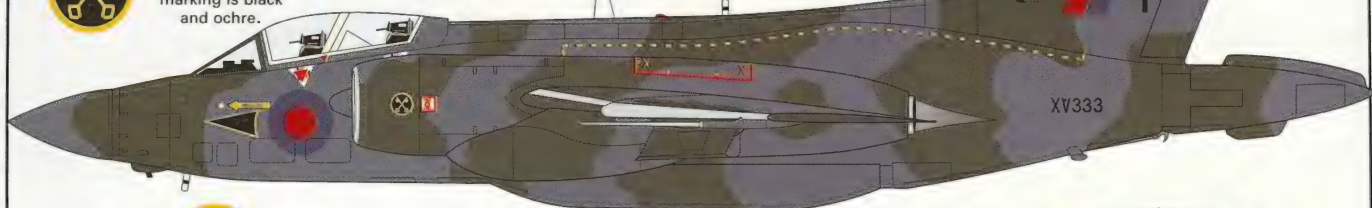
Buccaneers of Nos. 15 and 16 Squadrons based at Laarbruch were the mainstay of the RAF Germany strike force for many years. This picture of XV348 from No.16 Squadron shows that it has retained its original camouflage colours which featured light aircraft grey undersides but has adopted the toned down red and blue national insignia. (RAFG picture)





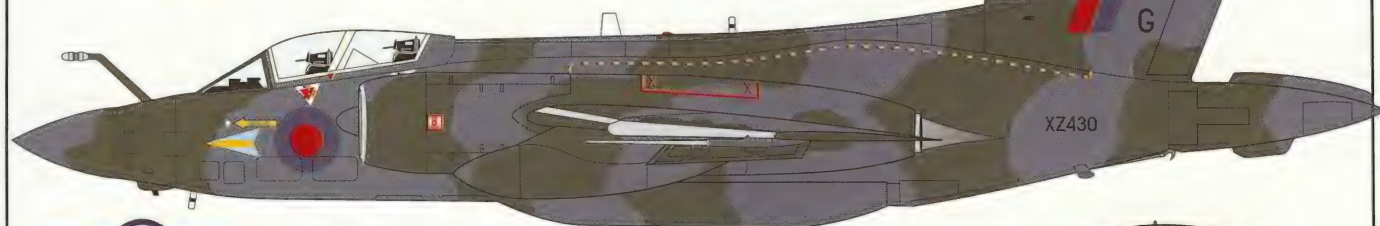
No. 16 Squadron.
Engine intake marking is black and ochre.

Hawker Siddeley Buccaneer S.2B XV333/I of No.16 Squadron during 1979. Matt dark green and dark sea grey overall camouflage finish with all squadron insignia being black with ochre outlines and detail. Code letter on fin and serial numbers in black.



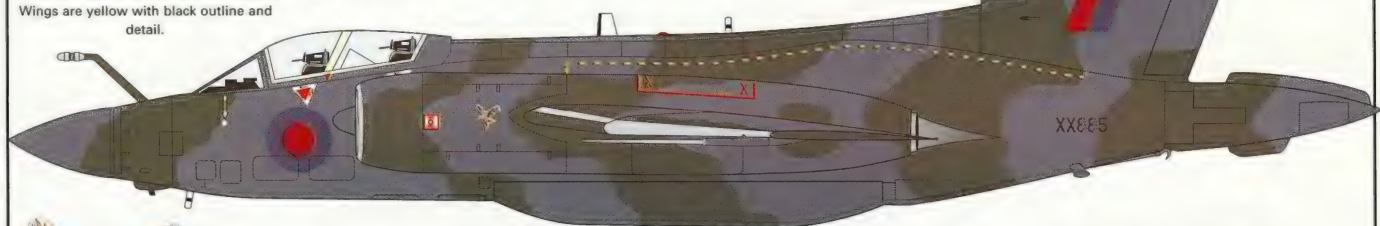
No. 16 Squadron
Fin marking is black and ochre.

Hawker Siddely Buccaner S.2B XZ430/G of No.208 Squadron during 1979. Matt dark green and dark sea grey overall camouflage pattern with black code and serial numbers. Nose flash is light blue, yellow and light blue. Eye emblem displayed on fin.

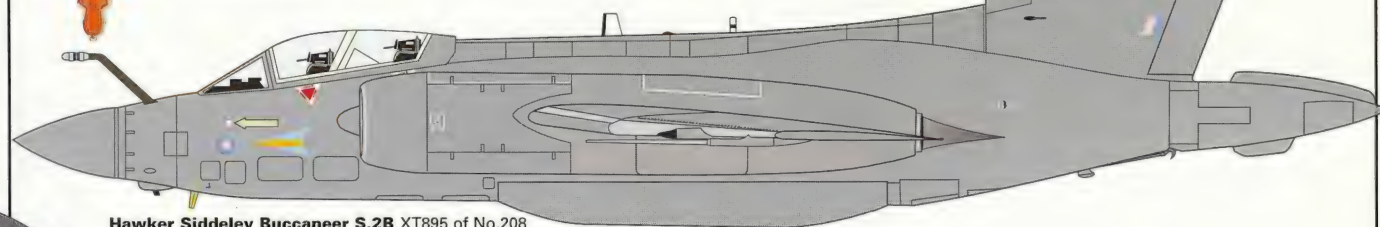


No. 208 Squadron Eye is black, grey and white on a light blue and dark blue circle. Wings are yellow with black outline and detail.

Hawker Siddeley Buccaneer S.2B XX885/B of No.216 Squadron during 1979. Standard matt dark green and dark sea grey overall finish with black serial numbers. Squadron markings displayed on intake walls and code letter 'B' on nose-wheel door.



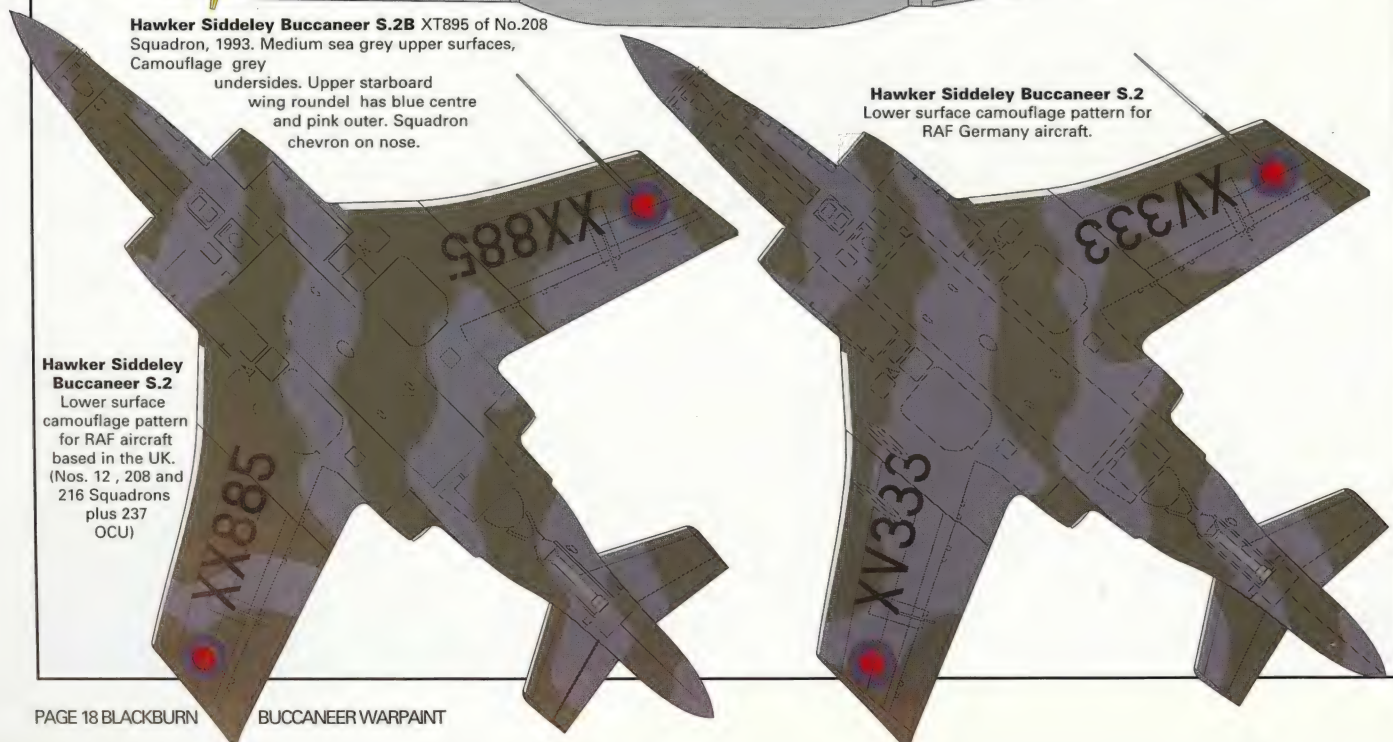
No.216 Squadron Bird is light brown. Legs, bomb and tail are orange. All outlines white. Area between legs and leg and tail is aircraft camouflage colour. Note that bird faces aft on starboard side.



Hawker Siddeley Buccaneer S.2B XT895 of No.208 Squadron, 1993. Medium sea grey upper surfaces, Camouflage grey undersides. Upper starboard wing roundel has blue centre and pink outer. Squadron chevron on nose.

Hawker Siddeley Buccaneer S.2
Lower surface camouflage pattern for RAF Germany aircraft.

Hawker Siddeley Buccaneer S.2
Lower surface camouflage pattern for RAF aircraft based in the UK. (Nos. 12, 208 and 216 Squadrons plus 237 OCU)





This well posed upper surface view of Buccaneer S.2B XV981 of No.12 Squadron clearly shows the camouflage pattern and the position and colour of the various yellow and red guideline markings on the wings and fuselage. Note that the wing fold mechanism appears to be without any form of covering. (MoD)

Honington as part of SACEUR's tactical assets in support of the two RAF Germany based-squadrons.

However, with the Panavia Tornado coming on stream it was to be the Germany-based Buccaneer squadrons that were to be the vanguard of conversion. No.15 Squadron was the first to relinquish its Buccaneers when it became a Tornado squadron on 1 July 1983 followed shortly afterwards by No.16 Squadron on 29 February 1984.

This move to the Tornado provided the opportunity to change the role of No.208 Squadron to fill the gap in SACLAN's defences created by the loss of No.216 Squadron. At first No.208 retained the Paveway system as its primary attack mode with No.12 Squadron providing the over-the-horizon capability through its air-to-surface Martel missile. At this time the decision

was taken to up-date 36 Buccaneer airframes over the period 1984-1988.

This programme was to centre around the new Sea Eagle missile working in conjunction with the tried and tested 'Blue Parrot' radar which was to be retained but refined for the overwater role. Incorporated in the package would be a new inertial navigation system then considered to be of similar design to the existing Ferranti Inertial Navigation System (INS) installed in the Jaguar. Also to be included in the up-date would be a Head-Up-Display and improved ECM/ESM equipment whilst the up-grading of the weapons would allow for the Sea Eagle missile, with Martel as an alternative.

By January 1985 the costs had risen from an initial £80 million to an estimated £150 million with the number of aircraft involved in the programme rising to 60.

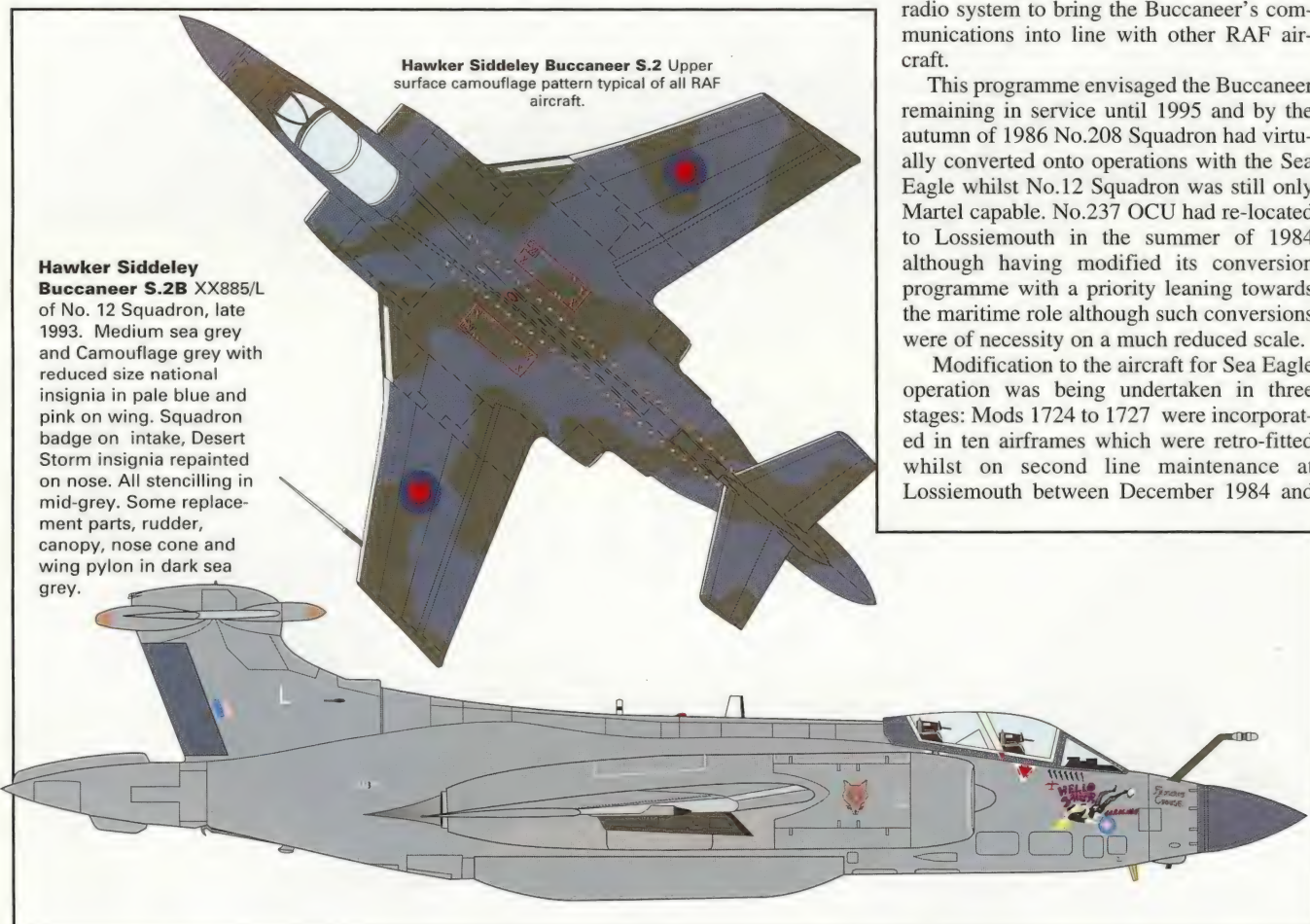
The work of up-grading the Buccaneer was undertaken by British Aerospace who had taken over from Hawker Siddeley, at its Woodford factory utilising many of the Brough workforce who were bused across on a daily basis. The first aircraft XW529 was however modified at Brough and then taken by road to Woodford for flight trials. The next three airframes XW546, XW534 and XV350 were delivered to Woodford direct.

The original requirement specified in ASR1012 promulgated by the MoD (Air) in February 1985 had incorporated the Ferranti FIN 1063 INS refinement to the 'Blue Parrot' radar and ARI 18228 ECM/ESM equipment modernisation to Guardian 200 standard with the proposed cockpit modifications and the installation of Tracor AN/ALE-40 chaff/flare dispensers now not taking place. Doubt also existed at this time over the proposal to fit the 11/40 NATO digital data-link and Marconi Sky Shadow jamming pods.

By January 1986 the programme had been reduced with the number of aircraft involved shrinking to 42. The modifications themselves were also entirely centred around the operation of the BAe Dynamics Sea Eagle missile, although the installation of the Tracor AN/ALE-40 chaff/flare dispensers would also go ahead together with a Plessey radio system to bring the Buccaneer's communications into line with other RAF aircraft.

This programme envisaged the Buccaneer remaining in service until 1995 and by the autumn of 1986 No.208 Squadron had virtually converted onto operations with the Sea Eagle whilst No.12 Squadron was still only Martel capable. No.237 OCU had re-located to Lossiemouth in the summer of 1984 although having modified its conversion programme with a priority leaning towards the maritime role although such conversions were of necessity on a much reduced scale.

Modification to the aircraft for Sea Eagle operation was being undertaken in three stages: Mods 1724 to 1727 were incorporated in ten airframes which were retro-fitted whilst on second line maintenance at Lossiemouth between December 1984 and





Left: The last Buccaneer squadron to form was No.216 at Honington. It was also the first to disband as a result of the metal fatigue problems encountered by the Buccaneer fleet in February 1980. (MAP)
Lower left: A No. 15 Squadron Buccaneer seen during an exercise based at Leuchars in May 1978. Note the small bomb carrier on the outboard pylon. (L.Peacock)



April 1986.

A further ten kits were installed by No.1 Buccaneer Maintenance Unit at RAF St.Athan during routine major servicing between April 1985 and September 1986, whilst the remaining aircraft were upgraded by British Aerospace during the avionics update programme.

LEBANON CRISIS

Whilst the initial considerations were being given to the viability of 'up-grading' the Buccaneer, events in the Middle East were taking one of their customary turns for the worst. In Lebanon UN peace-keeping forces which included a 100-strong British contingent were coming more and more under fire from Druze forces backed by Palestinian and other guerrillas who were threatening to break through the Lebanese Government Army's positions east of Beirut. With the latter having incurred severe casualties and

the obvious threat to UN troops, consideration was given to supplying air support.

At that time the United States had the aircraft carrier *USS Eisenhower* with its support group stationed off the Lebanese coast whilst the French had the *Foch* similarly placed and thus they were able to give support when required. However, the British government, fearing possible casualties to our own 100-strong contingent, decided to deploy six Buccaneers to RAF Akrotiri, Cyprus, to enable support to be given directly to their own troops should the need arise.

The initial deployment involved aircraft XV359, XV361 and XW530 from No.12 Squadron alongside XX885, XX901 and XZ430 from No.208 Squadron with crews being selected from the Wing for their experience and currency on the Pave Spike system. These six and a further six aircraft received the Tracor AN/ALE-40 chaff dispensers, although the mounting was not considered satisfactory, whilst only 11

Buccaneers underwent modification 5272/73 for the operation of AIM-9G/L Sidewinder missiles.

Under the code name 'Operation Pulsator' the crews of these six aircraft had, upon arrival in Akrotiri, to devise methods of carrying out a precision attack in a densely populated area with the minimum of risk to civilian life. In reality the delivery of 'smart' ordnance by laser designation can be achieved with a high level of success. In this instance, however, the actual target acquisition would be the major difficulty followed only then by effective designation. To achieve the desired result the crews decided upon three methods of carrying out an attack should it become necessary.

The first option was one of laser designation from the ground and was quite naturally considered the best solution in reducing the risk to the Buccaneers to the minimum. This created its own problems with the possibility of the Forward Air Controller (FAC) being unable to place himself in a position to designate the target, whilst poor or lost radio communication could have hampered any such plan.

The second option of laser designation from a Buccaneer at high level whilst a second attacked at low-level was considered equally as difficult with the problem of locating such a small target from around 15,000 ft and then accurately designating it. This problem was equally relevant to the third option of carrying out the attack by a single Buccaneer with self-designation at medium to high level. It was considered too great a risk to plan a mission that involved designation below 15,000 ft due to the known anti-aircraft and SAM capabilities of the Druze forces.

Although the crews involved trained in all three methods of delivery, in the event, they were not called upon to carry out an attack. In the six months that the detachment remained at RAF Akrotiri the Buccaneers

Buccaneers that took part in 'Red Flag' exercises in Nevada were often painted in temporary colour schemes more appropriate to their environment.





did carry out three overflights of Beirut at low-level involving pairs of aircraft. The first occasion took place at 09.00 hours local time on 11 September 1983 with the aircraft only carrying AIM-9 Sidewinders and an ALQ101 ECM pod for self protection. This overflight was repeated some two hours later by another pair and again on 13 September which was to be the last occasion that such an operation took place. In spite of this the detachment remained in Cyprus until March 1984 when the aircraft finally returned to Lossiemouth.

The experience gained from this operation and the realisation that in any future war 'smart' bombing would in all probability be the way forward, No.237 OCU gained a war tasking as a designating force for initially Jaguar, but subsequently Tornado aircraft neither of which had, at that time, laser designation in its available equipment.

STABILITY

The next seven years were to see the Buccaneer pacing itself through the normal round of exercises including a number of overland scenarios involving detachments to both the Red Flag and Maple Flag exercise areas in Canada and the US as well as being more involved in maritime sorties. It was in one of these latter events and in particular when deployed in Bermuda that the TV version of the Martel missile was finally phased out, the last active examples being fired dur-

Crisis in the Lebanon. Six Buccaneers from Nos. 12 and 208 Squadrons were deployed to Akrotiri, Cyprus, fitted with Pavé Spike laser designators for accurate bombing. Above: Aircraft from both squadrons are seen waiting on the Akrotiri dispersal. Right: A No.12 Squadron aircraft being marshalled into the dispersal with the AN/ALE-40 chaff dispenser fitted and Pavé Spike designator under the starboard wing. Bottom: Low and fast over Beirut. One of the Buccaneers seen low over the city from one of the UK observation posts when the first of three sorties was made on 11 September 1983. (MoD)





ing this exercise.

It was during this tranquil, almost routine, period that a number of things occurred in the Buccaneer world. In particular colour schemes began to change with the first move seeing the complete wrap around scheme deleting the light grey undersides. At the same time the three Lossiemouth units began to receive large individual identification letters worn on the fin. This had followed a period of varying combinations to make the aircraft more identifiable as the aircraft's serial was more often than not covered by jet exhaust staining.

The Lossiemouth answer saw No.12 Squadron adopt a two-letter code system ending in 'F' in line with the squadron fin motif. No.208 Squadron adopted the second letter as an 'S' whilst No.237 OCU took the letter 'C' indicating 'conversion'. Unfortunately, although carried out with the best of intentions, the Buccaneer being somewhat long in the tooth, was rotated through maintenance perhaps more regularly than some newer types and the whole coding system eventually fell apart with aircraft having No.12 Squadron codes with an OCU badge whilst operating with No.208 Squadron. Eventually the idea of the serial being moved to a higher place on the fin in either light blue or light grey in colour.

IN DEFENCE OF KUWAIT

As the sands of time were running out for the Buccaneer, Saddam Hussein stepped in to give the chance for it to bow out on a high note. Initially following the invasion of Kuwait in August 1990, it was envisaged that should hostilities eventually begin then it would be a one-sided, very high technological victory for the Coalition forces. As such the RAF deployed the best of its Tornado strike force and some interceptor Tornado F.3s to the Gulf region, there being little or no room for the aging Buccaneer.

To some degree this was understandable as the aircraft had a primary role of maritime

In addition to the 12 aircraft dispatched to the Gulf, Lossiemouth prepared two more as stand-bys. These included XV332 'Dirty Harriet' seen here in its full desert colour scheme (MoD)

attack against major surface raiders, a scenario hardly evident in the Persian Gulf let alone the desert itself. The fact that it retained a secondary role as a laser designator was not considered consequential.

Following the RAF's abandonment of JP233 attacks and the safe return to their bases after medium-level bombing raids which were no more effective than Bomber Command's efforts during World War 2, RAF Lossiemouth received an urgent call on 23 January 1991 to despatch six Buccaneers to Muharraq with all haste.

Quite remarkably when the Coalition forces had been allowed four months to prepare for what had been considered inevitable by many, Lossiemouth, in three days, had prepared six Buccaneers with laser designators and begun sending them to the Gulf region.

This tremendous effort on the part of the station had seen personnel and aircraft recalled from other duties, the Buccaneers camouflaged in desert pink, fitted with Have Quick II secure radios, Mk.XII Mode 4 IFF responders and eventually qualification trials of the AN/ALE-40 chaff/flare dispenser system.

On arrival in the Gulf, Wing Commander Bill Cope and his crews had an intense working-up period during which time they had to train Tornado crews who had never dropped laser-guided bombs before. From the initial call on 23 January, the Buccaneers led the first mission on 2 February and just ten days later against a road bridge target that crossed the River Euphrates at As Samawah.

In all the 12 aircraft performed 216 sor-

Ready to go. Six of the 14 Buccaneers that were prepared for duty in the Gulf were made operationally fit within three days of being given notice that they were required. Repainted in Desert Pink and equipped with additional laser designation equipment they flew out to Muharraq and went on their first mission on 2 February 1991.

ties during Operation Desert Storm lasting some 678.5 airborne hours and dropping 48 bombs but directing 169. They destroyed or rendered unusable 24 bridges before they returned to Lossiemouth at the beginning of March.

Most missions saw the Buccaneers fitted with a Westinghouse AN/ASQ-23E Pavé Spike target designator system which was externally indicated by an AN/AVQ-23E laser pod on the port inner pylon. The port outer pylon carried an AIM-9L Sidewinder missile for self protection whilst the number 4 station on the outer starboard side was fitted with a Westinghouse AN/ALQ-101(V)-10 jamming pod. The No.2 starboard inner pylon was flexible and at times was left empty whilst otherwise it carried a 1,000lb LGB or streamlined slipper tank which along with the weapons bay tank allowed the Buccaneers to require only one in-flight refuelling on the outbound leg for missions into Iraq compared to two or three times for the Tornados.

During their time at Muharraq and Dharhan the Buccaneers received codes and names. Six were coded P, I, R, A, T, E whilst the others became coded S, L, O, G, U, N which was rather apt. Each aircraft was named after a famous brand of Scottish whisky and most received appropriate mission symbols and nose art. The following list gives the aircraft serial, its whisky name, nose art and number of missions:- XV863/S Tamnavoulin, 'Debbie, Sea Witch' (six mission symbols), XX885/L Famous Grouse, 'Caroline, Hello Sailor' (seven mission symbols), XX894/O Aberlour, no name (seven mission symbols), XX895/G Glenfiddich, 'Lyn, Jaws', (five missions symbols), XV352/U Tamdhu, no name, (10 mission symbols), XX901/N Glen Elgin, 'Kathryn, The Flying Mermaid' (nine mission symbols and one Antonov An-12), XX899/P, 'Laura, Laser Lips' (no mission symbols), XX892/I, Glen Lossie, no name (eight mission symbols), XW547/R The Macallan, 'Pauline, Guinness Girl', (11 mission symbols), XW533/A Glenfarclas, 'Fiona, Miss Jolly Roger' (11 mission symbols), XX889/T Longmorn, no name, (14 mission symbols), XW530/E Glenmorangie, no name, (12 mission symbols).



BUCCANEER KITS, DECALS AND ACCESSORIES

Compiled by David Hannant, Correct to December 1995

Injection moulded and vacuform kits

Scale	Manufacturer	Identification	Details
1:144th	Welsh Models	WHP JW08	S.Mk.2B
1:72nd	Matchbox	PK106	S.Mk.2B
1:72nd	Matchbox	PK142	S.Mk.2B Desert Storm
1:72nd	Airfix	AX08066	Buccaneer S.2
1:48th	Airfix	AX08100	S.Mk.2B No. 12 Squadron RAF
1:48th	Airfix	AX08101	S.Mk.2 RAF and Royal Navy
1:32nd	Aerodynamix	-	S.Mk.2B

Conversion parts

1:72nd	Maintrack Models	MK7202	S.Mk.1 resin conversion parts
1:72nd	Maintrack Models	MKAP01	Buccaneer slipper tanks in resin
1:48th	Maintrack Models	48:16	Buccaneer S.Mk.1 resin conversion parts, incl.decals
1:72nd	Aeroclub	ABC011	Buccaneer canopy
1:72nd	Aeroclub	ABEJ027	Martin Baker Mk. 6SB ejection seats for Buccaneer
1:72nd	Aeroclub	ABV062	Buccaneer nose wheel in white metal
1:48th	Airwaves	AEC48072	Buccaneer air brakes in etched brass
1:48th	Airwaves	AEC48073	Buccaneer cockpit set in etched brass
1:72nd	Airwaves	AES72008	Buccaneer undercarriage in white metal
1:72nd	Airwaves	AES72010	Buccaneer buddy refuelling pack in resin
1:72nd	Airwaves	AES72012	Buccaneer pylons in resin
1:72nd	Airwaves	AES72015	Buccaneer Martel data link pod in resin
1:72nd	Airwaves	AES72016	Buccaneer wing ECM bullets in resin
1:72nd	Airwaves	AES72062	2 x Buccaneer S.2B ejection seats in resin
1:72nd	Airparts	AKS15	Long range tanks in resin
1:72nd	Airparts	AP016	Buccaneer radome in resin
1:72nd	Airparts	AP021	Buccaneer RWR aerials in resin
1:48th	Eduard	ED48130	Buccaneer exterior set in etched brass
1:48th	Flightpath	FHP4855A	Buccaneer S.2B detail set in etched brass
1:48th	Paragon Designs	PAR48054	2 x Buccaneer Mk.6 ejection seats in resin
1:48th	Paragon Designs	PAR48082	Buccaneer flaps in resin
1:48th	Paragon Designs	PAR48083	Buccaneer bulged wheels in resin
1:72nd	PP Aeroparts	PPAL722	Buccaneer detail set in etched brass
1:48th	Xtraparts	XP4853	Buccaneer S.2B cockpit detail set in resin
1:48th	Xtraparts	XP4854	Buccaneer ejection seats in resin

Decals

1:72nd	Almarks (ED Models)	AKS15	No.12 Squadron 75th anniversary markings
1:72nd	Modeldecals	MD057	Decals for Buccaneer, Sea King and Sea Hawk
1:72nd	Modeldecals	MD109	Gulf war markings for Buccaneers Set 1
1:72nd	Modeldecals	MD110	Gulf war markings for Buccaneers Set 2
1:48th	Three Guys Replica	TGR48011	Royal Navy Buccaneer markings
1:72nd	Xtradecals	X00772	Markings for Buccaneer S.2Bs in RAF service
1:72nd	Xtradecals	X02272	Gulf war markings for Buccaneers No.1
1:72nd	Xtradecals	X02372	Gulf war markings for Buccaneers and Victors No. 2
1:72nd	Xtradecals	X02472	Gulf war markings for Buccaneers No. 3
1:48th	Xtradecals	X02548	Markings for Royal Navy Buccaneers.

Two reserve aircraft were also prepared at Lossiemouth, XV332 which was named 'Dirty Harriet' and XX893 which failed to capture anyone's imagination, neither of these aircraft was required to deploy to the Gulf.

The end of the Gulf war, although bringing fame to the now dwindling Buccaneer force did not deter their demise. The advent of TIALD which received its baptism of fire in the Gulf had by then rendered Pave Spike mounted on the Buccaneers obsolete therefore as planned on 1 October 1991, No.237 OCU stood down passing what few aircraft remained for operational conversion onto the two squadrons.

At the same time as the desert pink colour scheme was being washed off the first Buccaneer appeared in a medium sea grey and Camouflage grey scheme. The aircraft, XW543, was to be the first of an eventual eight to receive these colours as the Buccaneers passed back to depot level maintenance. This was followed by XW542 in May 1991 whilst the other six aircraft comprise XV332, XV352, XX885, XX889, XX894 and XX895 all of which had been involved and modified for Desert Storm.

The final honour bestowed on the Buccaneer was when the Wing was chosen to lead the Queen's Birthday Flypast in June 1993. For this event the aircraft were

No.12 Squadron celebrated the squadron's 75th anniversary in 1991 by painting Buccaneer XV543 with a broad green stripe from the tail unit to the nose.

detached to RAF Manston where 16 Buccaneers practised for their last major event before disbandment.

Nos. 12 and 208 Squadrons continued to soldier on as the main thrust of SACLANT's maritime force whilst the RAF and British Aerospace struggled to bring the Tornado GR.1B onto line. No. 27 Squadron at RAF Marham was slated to take on the mantle of No. 12 Squadron which it finally achieved on 1 October 1993 when No. 12 (Buccaneer) Squadron finally stood down. No. 208 Squadron continued in its role for a further six months as the sole squadron at RAF Lossiemouth. No. 12 (Tornado) Squadron re-located from its home at RAF Marham on

7 January 1994 to begin the final phase of its maritime work-up which allowed the venerable Buccaneer to retire gracefully from operational flying on 31 March 1994.

LAST OF THEIR KIND

Just before its final demise a photo-call was arranged where aircraft were painted to represent the RAF use of the Buccaneer with each squadron represented including a token gesture to its former naval life. For the event XV352 resplendent in its barley grey colour scheme received No.237 OCU markings, XX900 those of No.12 Squadron, XV351 No.15 Squadron, XW527 No.16 Squadron, XX889 No.208 Squadron, XX901 No.216 Squadron and XX894 as 020/R of 809 Squadron Fleet Air Arm.

Three weeks later No.208 Squadron finally retired the Buccaneer from RAF service ending some 31 years of operational service - a fitting tribute to an aircraft, manufacturer and crews that will long be remembered in British military aviation history.

But the story did not quite end there. As mentioned earlier a number of Buccaneers were acquired by the Ministry of Defence (Procurement Executive) through the Royal Aircraft Establishment and the Aeroplane and Armament Experimental Establishment, both by now retitled as part of the Defense Research Agency.

The three aircraft concerned, XW986-988, which had received rather attractive yellow and green colour schemes had by 1994 been repainted in the raspberry ripple red, white, and blue colour scheme of the experimental establishments. These three jets together with a few others that had been withdrawn from front line squadrons for limited periods had provided reliable test platforms for a great deal of experimental work over the years. But with the demise of the Buccaneer from the active inventory it was clear that their cost effectiveness would be shortlived.

The last military flights of a Buccaneer therefore took place in the first week of October when the three aircraft made a final flypast over the new *HMS Ark Royal* in the Channel so ending the flying part of the Buccaneer's history.

Although most of the 193 British and 16 South African Buccaneers have now been scrapped, finding their way to yards at Elgin,

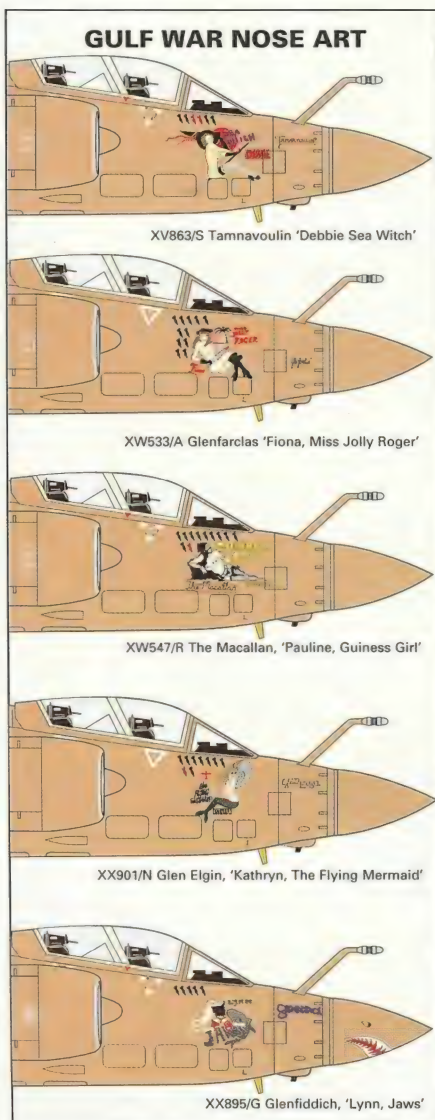


Macclesfield and elsewhere to be returned to produce or expended as range targets on the Pendine Range or on fire dumps at various airfields around the country, some, but only a few, have been kept for display purposes.

RNAS Yeovilton was the first to gain a Buccaneer for the Fleet Air Arm Museum with the development aircraft XK488 followed by RNAS Lossiemouth which received XK532. This has since been swapped for XV863 another that served during Desert Storm.

The RAF Museum quite naturally gained a Gulf veteran in the shape of XW547 whilst Squadron Leader Rick Phillips made history on returning XV168 to its birthplace at Brough by flying into the small airfield on 5 October 1993.

A few others have found their way into private museum ownership and it is quite possible a few that still serve as ground instructional airframes will eventually do likewise. Sadly the indomitable Buccaneer will not be seen flying again and these few static examples must serve as memorials to this well liked and incredible aeroplane.



The last Buccaneer to be built, XX897, spent all of its career as a test aircraft with the Defence Research Agency, Bedford. It was preserved by the Source Classic Jet Flight at Bournemouth and is seen on its last ferry flight on 19 August 1993.

HAWKER SIDDELEY BUCCANEER PRODUCTION LIST

PRODUCTION of the Buccaneer was entirely at the Blackburn Aircraft factory at Brough, near Kingston-upon-Hull, flight testing being carried out at Holme-on-Spalding-Moor, near York. Initial production was entirely for naval use, but some later production was for the RAF, and many earlier aircraft were converted on transfer from Royal Navy charge, and in some instances re-converted to later marks.

Production of each variant was as follows:

Quantity	Variant	Serials
6	Prototypes	XK486 to XK491
14	Pre-production	XK 523 to XK536
40	Production S.Mk.1	XN922 to XN935, XN948 to XN973
2	Pre-production S.Mk.2	XK526 and XK527 (both S.1 conversions)
84	Production S.Mk.2	XN794 to XN983 (originally to have been S.1s) XT269 to XT288, XV152 to XV168, XV332 to XV361, XV863 to XV869 (plus XV870 to XV879 cancelled)
49	Production S.Mk.2B	XW525 to XW550, XW986 to XW988 (plus XW989 cancelled), XX885 to XX901, XZ430 to XZ432
16	Production S.Mk.50	411 to 426 (for South African Air Force use, also 427 to 440 cancelled)

The following list of conversions is believed to be complete:

Version	Serial
S.Mk.2A	XT271, XT273, XT274, XT277, XT278, XT283, XT284, XV152, XV154, XV156, XV161, XV162, XV163, XV336, XV338, XV339, XV341, XV345, XV354, XV356, XV357, XV360.
S.Mk.2B conversions	XN976, XN977, XN978, XN981, XN983, XT270, XT275, XT276, XT279, XT280 (ex S.2C), XT281, XT286, XT287, XT288, XV155, XV157, XV160, XV165, XV166, XV168, XV169, XV333, XV334, XV 336 (ex S.2A), XV340, XV341 (ex S.2A), XV342, XV345 (ex S.2A), XV347, XV349, XV350, XV352, XV353, XV355, XV356, XV359 (ex S.2C), XV361 (ex S.2C).
S.Mk.2C	XN974, XN982, XT280, XV337, XV344, XV358, XV359, XV361.
S.Mk.2D conversions	XK527, XN981, XT287, XV332, XV333, XV351, XV353 XV863 to XV869 built with Martel capability, but initially had no special designation

BUCCANEER SQUADRONS AND UNITS

ROYAL NAVY:

700B Squadron (S.2 XT241 240/LM), **700Z Squadron** (S.1 XK531 680/LM), **736 Squadron** (S.1 XN934 633/LM, S.2 XV339 643/LM, S.2B XV157 A), **800 Squadron** (S.1 XN930 106/E), **801 Squadron** (S.1 XN954 123/V, S.2 XV332 233/H), **803 Squadron** (S.1 XN959 610/LM, S.2 XV354 614/LM), **809 Squadron** (S.1 XN924 220/LM, S.2 XV344 325/LM, S.2C XN982 033/R, S.2D XN981 026/R).

ROYAL AIR FORCE:

No.12 Squadron (S.2A XV165 D, S.2B XV340), **No.15 Squadron** (S.2A XV863, S.2B XW544 H),

No.16 Squadron (S.2B XX892 R), **No.208 Squadron** (S.2A XV336 D), **No.216 Squadron** (S.2B XZ432).

237 Operational Conversion Unit (S.2A XV432, S.2B XW536)

EXPORTS

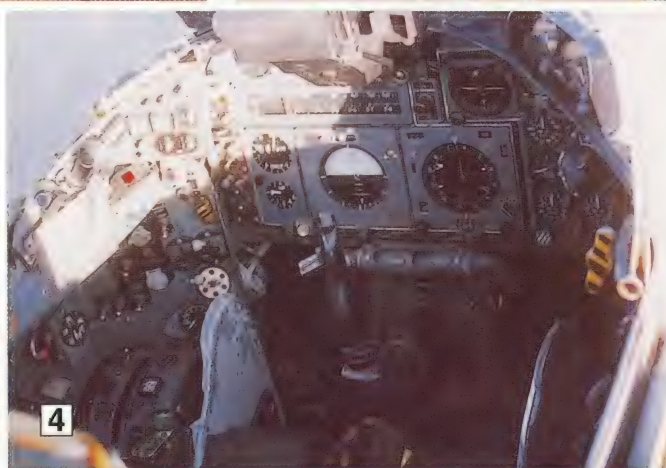
South African Air Force 24 Squadron (S.50 418)





BUCCANEER IN DETAIL

1. The wing fold mechanism of the Buccaneer S.2 with the wing flap partially lowered. 2. Cockpit area and jet intake with the crew entrance ladder in position. Note the windshield that protects the rear seat occupant. 3. Air brakes, mounted on the rear of the fuselage, shown in the open position. The shape of the jet orifice is also evident. 4. Front cockpit interior. The rear cockpit of XX900 was devoid of instruments and therefore not photographable. 5. In-flight refuelling boom. Note the three white line-up marks on the port side only. 6. Nose wheel undercarriage with the single door opening to starboard and landing light together with two aerials. 7. Main undercarriage leg, rear fuselage and tail unit. 8. Engine accessibility is gained through doors above and below the intakes.



The publishers are grateful to the British Aviation Heritage, Bruntingthorpe, for allowing their ex-No.12 Squadron Buccaneer S.2 XX900 to be photographed for this page.

Hawker Siddeley Buccaneer colour schemes

Blackburn Buccaneer S.Mk.1 XN965, 226/LM of 809 Squadron in 1965. Overall antirash white with toned-down roundels and numerals. Radomes on these early Buccaneers were left in natural self coloured glass fibre.



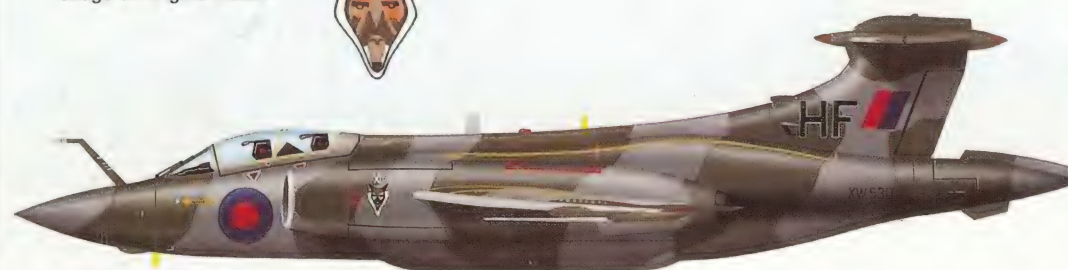
Blackburn Buccaneer S.Mk.2 XV156 100/E of No.800 Squadron in 1966. Upper surfaces were in Extra dark sea grey with anti-flash white undersides. Fuselage lettering in white. Aircraft code number in black with white outline. 800 Squadron badge on nose.



Blackburn Buccaneer S.Mk.2 XT270 of No.12 Squadron, Honington, 1970. Upper surface in disruptive scheme of dark green and dark sea grey with light grey undersides. Serials in black under wings. No.12 Squadron badge on engine intake.



Hawker Siddeley Buccaneer S.Mk.2B XW530 of No.12 Squadron based at Lossiemouth in the early 1980s. Overall disruptive pattern of dark green and dark sea grey including undersides. Fin lettering in black with white outline. Serials in black on fuselage and undersides of wings. Squadron insignia on engine intakes, (see above left)



Hawker Siddeley Buccaneer S.Mk.2B XN976 of No.208 Squadron Lossiemouth, 1991. This Buccaneer received a special scheme to commemorate the squadron's 75th anniversary. Overall black with light blue spine and tail area. An enlarged version of the squadron badge appeared on the air intake. The 'Sphinx' on the fin marks the squadron's association with the Middle East. The chevron on the nose is an enlarged version of the standard squadron markings.



Blackburn Buccaneer S.Mk.50 421 of 24 Squadron South African Air Force, Waterkloof, 1990. Upper surfaces in dark sea grey with PRU blue undersides. Aircraft number in black. National markings in six positions. Squadron badge on intake, see enlargement above left.



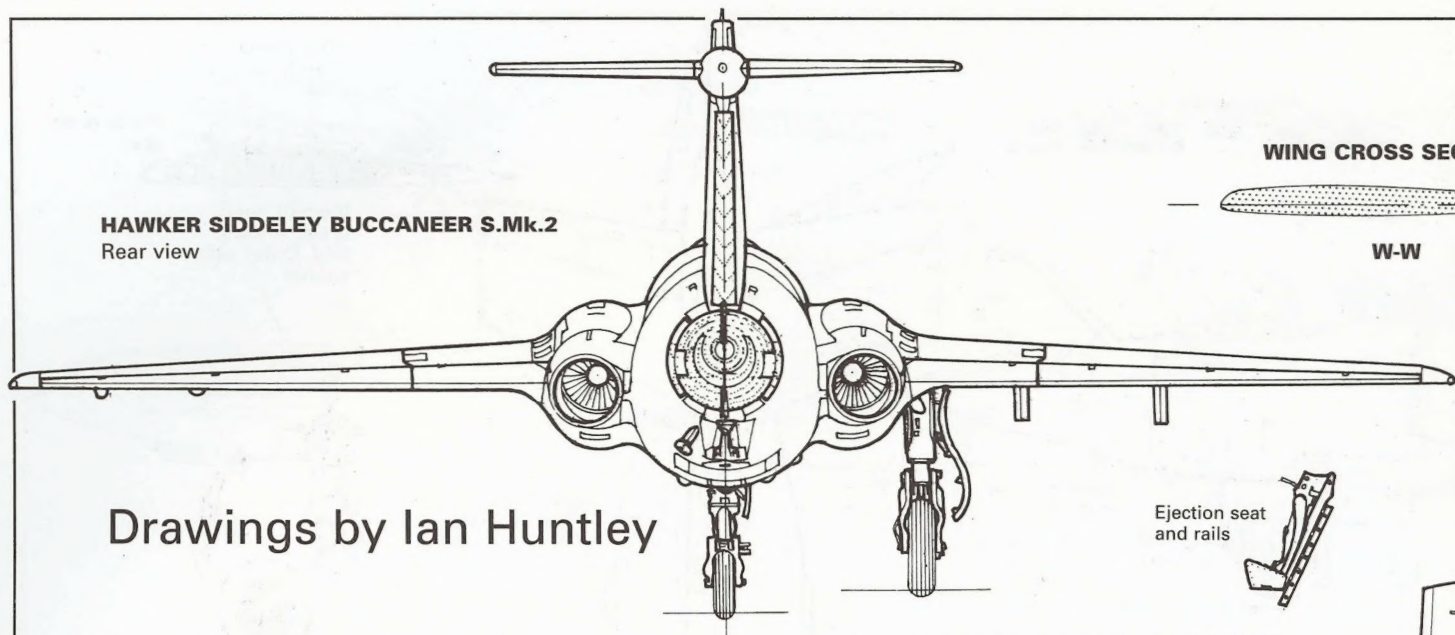
Hawker Siddeley Buccaneer S.Mk.2B XX895 of No.208 Squadron, Lossiemouth, 1993. Medium sea grey and Camouflage grey with toned-down markings. No.208 Squadron badge on fin and squadron chevron on nose in front of roundel.



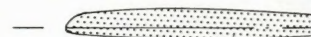
Credits: Mark Rolfe would like to thank the staff at the Fleet Air Arm Museum, Yeovilton for the help and assistance given in the preparation of these drawings.

DRAWINGS BY MARK ROLFE

HAWKER SIDDELEY BUCCANEER S.Mk.2
Rear view



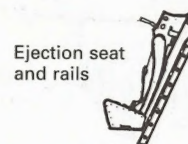
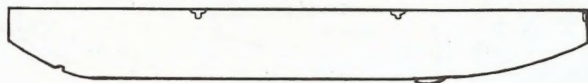
WING CROSS SEC



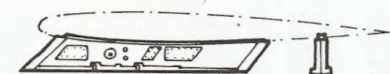
W-W

Drawings by Ian Huntley

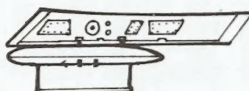
Special long-range
tank fitted into bomb bay
of Buccaneer S.Mk.2



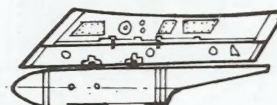
Ejection seat
and rails



Standard pylon in
use for all wing stations

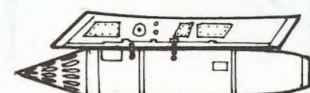


Pylon with adaptors for
small bomb carriers



Fairing is a
retrospective
modification

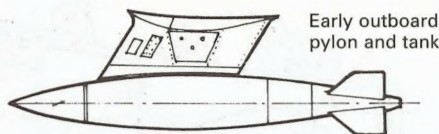
HAWKER SIDDELEY BUCCANEER S.Mk.2
Underside plan view



Pylon with SNEB
rocket pack



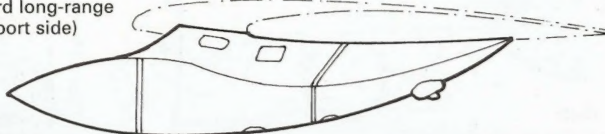
Pylon with Westinghouse
radar jamming pack



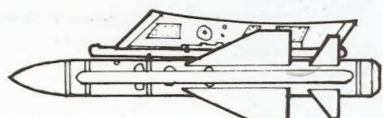
Early outboard
pylon and tank



Inboard long-range
tank (port side)

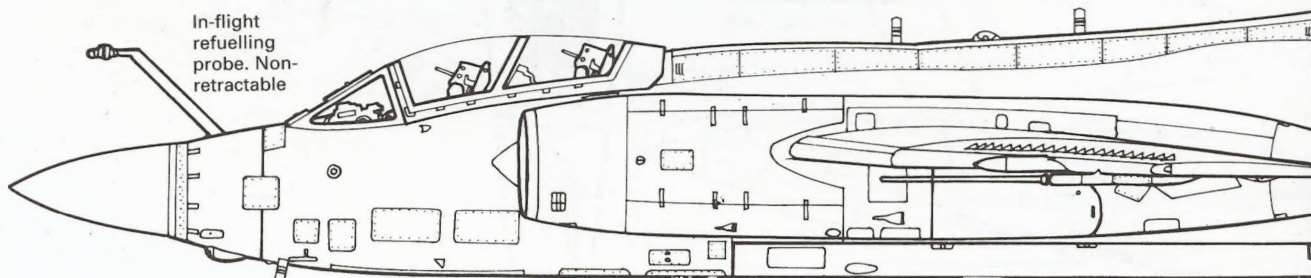


1,00



Pylon and adapter
for Martel missile

In-flight
refuelling
probe. Non-
retractable



HAWKER SIDDELEY BUCCANEER S.Mk.2
Port side view

Bomb bay rotates internally

TION

CANEER S.Mk.2

ouse

0lb bomb

VHF homing
mounting, port
and starboard
fitting optional

De-icing slit

H-H

G-G

F-F

Starboard side
of air brake shown
in open position

Boundary layer
control blowing slit

E-E

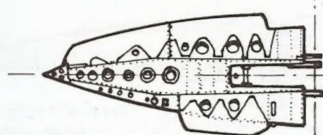
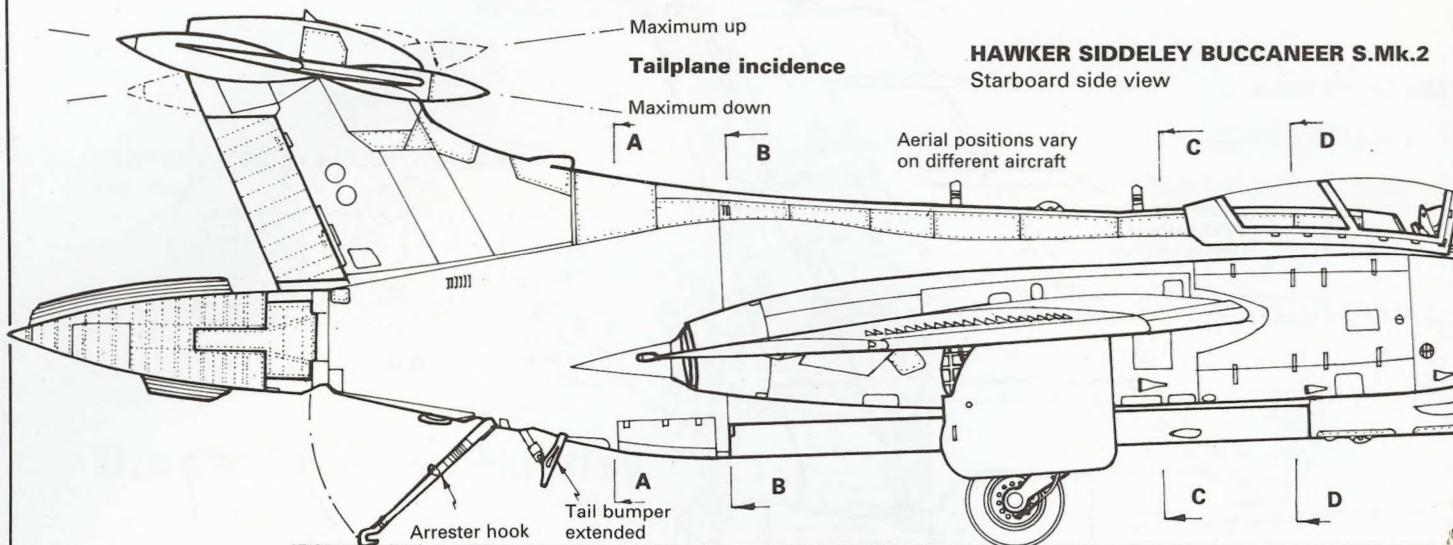
FUSELAGE CROSS SECTIONS

1:72nd SCALE

Feet
Metres

C-C

D-D



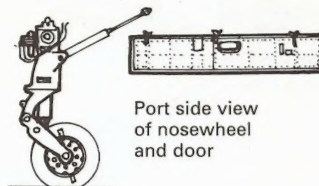
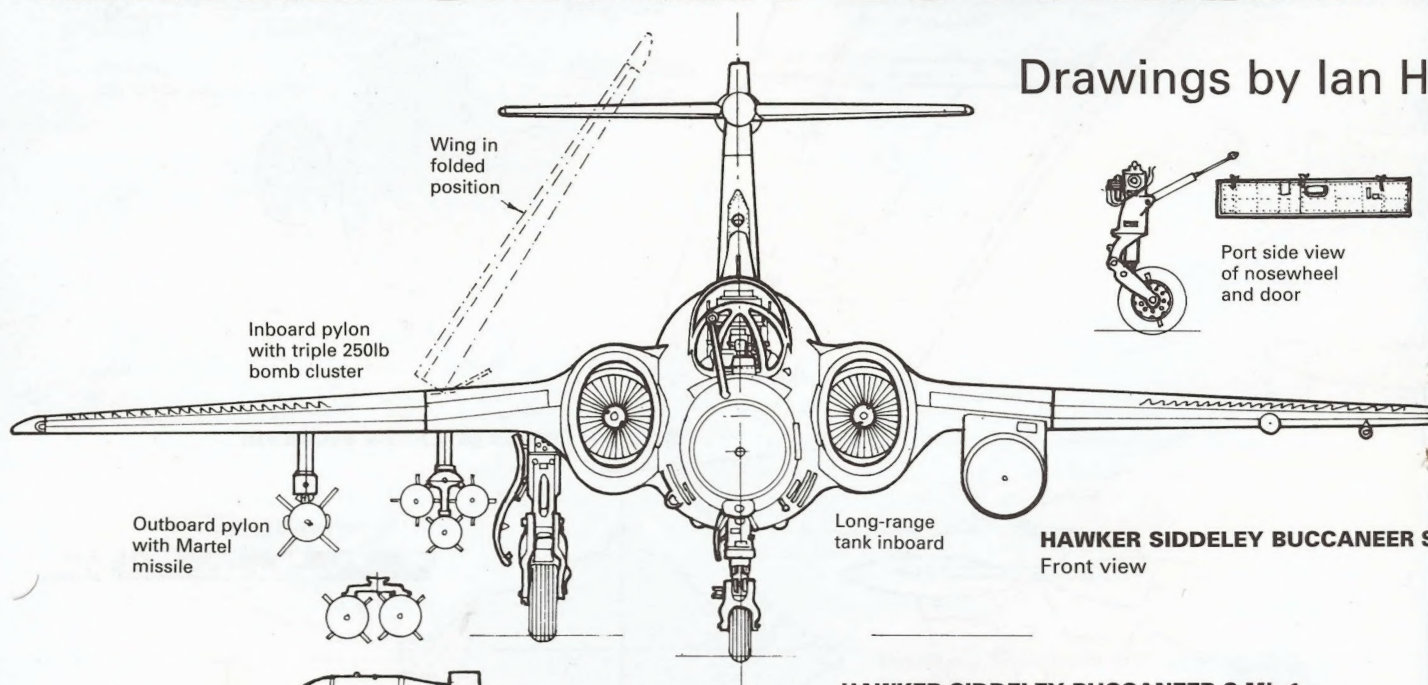
Inside face of port air brake

WARPAINT

Boundary control b
 slits

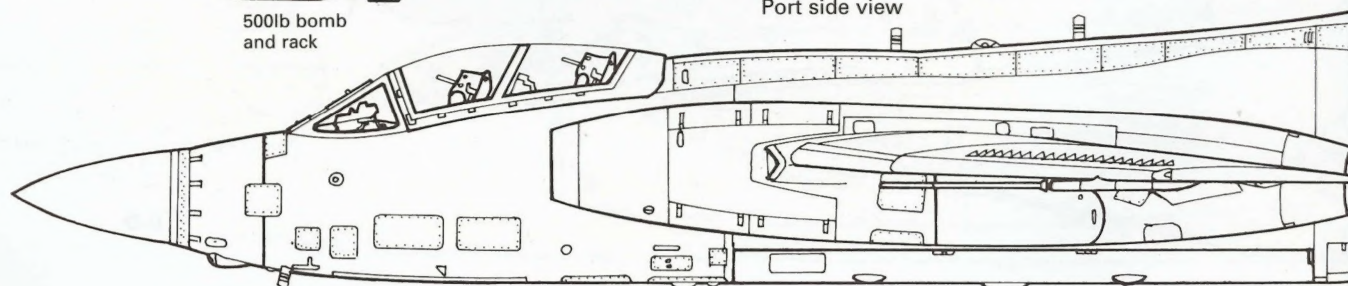
HAWKER SIDDELEY BUCCANEER

Drawings by Ian H



Port side view of nosewheel and door

HAWKER SIDDELEY BUCCANEER S.Mk.1
 Port side view



1:72nd SCALE

Feet
Metres

Starboard airbrake
extended

Outer wing
spar hinge
line

Folded doors
open

View of inner
break of wing
fold. Outer side
similar

Camera
housing

HAWKER SIDDELEY BUCCANEER S.Mk.2
Upper surface plan view

**Inner face of
mainwheel and door**
Legs 'kneel' during
retraction to fit
restricted fuselage
space

layer
lowering

untley

A-A

S.Mk.2

Nose in folded
position

Dotted line indicates
position of nose when
in folded position

B-B